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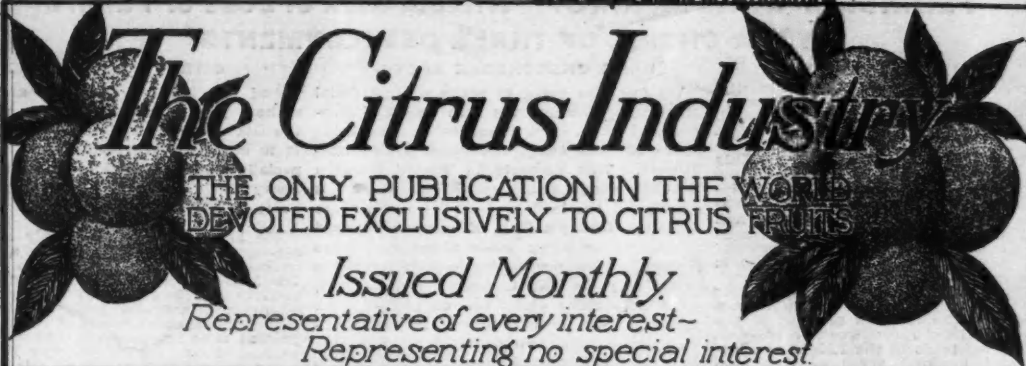
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U.S. Department of Agriculture



The Citrus Industry

THE ONLY PUBLICATION IN THE WORLD
DEVOTED EXCLUSIVELY TO CITRUS FRUITS

Issued Monthly
Representative of every interest—
Representing no special interest.

VOL. 5, NO. 6

TAMPA, FLA., JUNE, 1924

15 CTS. A COPY



Even Good Fruit Will Sell Better When In Good Company

Here is a parallel of interest to Florida citrus growers: A good many years ago cotton was sold as just cotton. Then in North Florida growers of Sea Island cotton joined to sell their product as long staple, in distinction to common, or short staple, cotton.

Immediately the price of long staple rose two cents a pound above short staple. The long staple was in greater demand. In a short time the price for long staple was almost double that of short staple cotton.

History repeats itself. There is need for growers of good citrus fruit now to join in distinguishing their products. The BLUE GOOSE trade mark offers the one best opportunity for doing this.

BLUE GOOSE oranges and grapefruit now occupy a unique position at the top of the market wherever sold. They are well advertised. Growers of good oranges and grapefruit, therefore, will find the BLUE GOOSE reputation of very great aid to them in obtaining the fullest value for their fruit.

Shipments this season:

68% Blue Goose, 20% AFG; 12% in bulk or in plain wraps.

American Fruit Growers Inc.

ORLANDO



AN AVOCADO GROVE

FLORIDA'S WONDER CROP Without Risk of Loss or Failure

YOUR CHOICE OF THREE DEVELOPMENTS

FT. MYERS SECTION

We have just purchased in Lee county, southwest of Fort Myers, several hundred acres of the best avocado land in the world. This land is not only good for avocados but produces to perfection, Mangos and Bananas, two fruits that have a great future. This land is not only of the best quality for the above fruits, but it is one of the best located places in Florida as far as frost protection is concerned. It lies south of and near the Caloosahatchee River, where in 1917 the natives claim there was absolutely no frost. It was one of the few places in Florida that was untouched by that cold. This land is well drained and prepared for irrigation so that there will be no chance of a failure in the crop on account of the fruit dropping in the dry weather of May, as it is inclined to do in the Ridges of Florida. Several hundred acres of this land is cleared and ready for trees.

We expect to commence planting commercial groves of five and ten acres within the next two weeks and continue planting until we have planted at least five hundred acres during the next few months.

LAKE OKEECHOBEE SECTION

We are also going to make a commercial planting of five and ten acre tracts of Avocados, Mangos and Bananas on the south shore of Lake Okeechobee near South Bay, Florida. This property is located between the Miami and Hillsborough Canals and is considered the best land of the south shore district. One planting of several hundred acres is now being made about two miles from where our proposition is located. While there may be slight danger from floods, most authorities claim the danger is over. Avocados will bear profusely in the Everglades the third year from planting, and a fair crop the second year. This is much quicker than in other locations. We will commence planting these groves within the next thirty days and will plant all that our demand calls for.

CITRUS PARK SECTION

And last but not least, we are going to make a planting of 100 acres to avocados in the flat woods lake region near Citrus Park. It is our firm belief that this land is especially adapted to avocados. It is rather heavy soil, flat woods, and is easily drained as it is slightly rolling.

We have proven conclusively at Lutz on similar land that it will grow a wonderful avocado grove. If you have any doubt of the following statements we will take you to Lutz and show you. We have more than a hundred avocado trees two years and eleven months old that are carrying at the present time from twenty-five to fifty fruit each, and as they are winter bearing will bring from \$12.50 to \$25.00 per tree. Ten or twelve of these trees are Lindas, which now carry as high as fifty fruit per tree.

Lindas have sold in the market for the past two years for from \$1.00 to \$1.55 per fruit.

SEE THE TREES GROWING

In the yard of our manager, Mr. C. E. Thomas, located at 5108 Seminole Ave., is a wonderful demonstration of what can be done in avocados in the vicinity of Tampa. On this small plot of ground there are over ten trees that are holding at the present time an average of more than fifty fruit each. One Fuerte tree has over three hundred, one over two hundred and fifty. Two Taylor trees have over fifty fruit each, and three Lindas have more than twenty-five fruit each. This fruit is not dropping and we believe it will mature. If it does, it will mean from \$25.00 to \$175.00 per tree, and the trees are only three years and one month old at this time.

Visit this yard and look over the trees at any time excepting Sundays and you will be convinced that the avocado is a wonderful proposition for Florida.

Some Notable Examples

I have in my office a letter from J. T. Wheedon, Yorba Linda, California, who is one of the largest growers in that state. Mr. Wheedon shipped us quite a large quantity of Fuerte budwood about a year and a half ago, and at that time wrote us that all of the budwood that he had sent us came from trees that produced not less than \$150.00 worth of fruit per tree that year, and that some of the trees have produced as high as \$350.00 worth of fruit per tree.

Sometime ago I received a letter from Mr. Krome, of the Coral Reef Nurseries, Homestead, Florida, stating that the average price he received for Guatemalan avocados for the past two years was seventy-five cents each, and that the Linda avocados have brought over a dollar each.

The two above letters are from responsible men, both of whom are at the head of the list of avocado grove men. It is our impression that Mr. Wheedon has several thousand bearing trees, and we have heard it stated that Mr. Krome has in the neighborhood of five thousand bearing trees. These two men are in a position to know what can be done with avocados, and we have no doubt that either of these two gentlemen will be glad to affirm the above statements if a self-addressed stamped envelope is sent them for reply.

We believe that the growing of avocados will be the most profitable horticultural proposition ever known, and that people who own avocado groves themselves or buy developed groves from others will be making a wonderful investment and a big profit.

A Safety Valve for Timid Avocado Enthusiasts

We believe there are thousands of people in Florida who now expect to either plant an avocado grove themselves or buy a grove from commercial planting. Perhaps they cannot quite make up their minds which they would rather do. Our opinion is that the average person will find it much more profitable to buy an avocado grove planted and taken care of by some responsible firm. Most planters lose a large percentage of trees. We ourselves up to the present time have lost over 20 per cent. If you buy a grove from us you are sure to get a complete grove, as it is our intention and agreement to replace any trees that die so that the grove will be complete at the end of the third year unless destroyed by an act of Providence such as flood or severe cold, for which we will not be responsible. If you buy an

Our Proposition in Detail

The following is our proposition: We will plant a grove of five or ten acres and care for it for a period of two years at \$750.00 per acre on the following terms: \$100 when the application is made and \$400.00 or the balance of \$500.00 when the papers are made and ready for delivery. This will be within thirty days from the time the first payment of \$100.00 is made. The balance of the payments to be made at the rate of \$100 per month for each five acre grove until the total of \$3,750.00 is paid.

At the option of the purchaser, we will take care of the grove the third year at cost plus ten per cent.

Two people can join together and take two and a half acres over and make the payments under one contract, which will make their payments \$50.00 a month each. This proposition will give practically every one a chance to own an avocado grove. We may find after we get deeper into the proposition that it will be necessary to charge more for these groves, and they certainly will never be any less. Our first thought was to make the price \$1,000.00 an acre, but after considerable figuring we believe we can make a reasonable profit at \$750 per acre, and it is our desire to make the price as low as possible to make a reasonable profit.

avocado grove from us and decide later on that you would rather make your own planting, we will cancel your contract at any time within two years and give you avocado, mango or citrus trees in exchange for money paid up to that date, so that by this plan you can get in on the avocado business right away and take no chance of getting something you do not want. This plan will give you an opportunity to make a profitable investment.

When you send in your order, tell us which location you want to be placed in, whether Fort Myers, Everglades section, or Citrus Park tract.

In this connection we will state that this will give you an opportunity to size up the situation and it will not make any difference to us in which section you select your grove.

ACT NOW!

If you want to be sure of getting a grove from our first planting, we would advise you to send us your order at once. It is a positive fact that there are not enough avocado nursery trees in the nurseries today to supply one-tenth the demand. If we are as successful in selling a large number of groves as we expect to do, we will reserve all of our avocado plants of which we have about thirty thousand from our plantings and to take care of our customers with groves, who may want later on to exchange for trees to do their own planting.

If you are convinced that one of our avocado groves will be a good investment, sign the coupon in the corner and mail to us with your check for \$100 and we will have your contract prepared and send to you for signature.

THE C. E. THOMAS NURSERIES

Bruen-Webb Building
TAMPA, : FLORIDA

The C. E. Thomas Nurseries,
Tampa, Florida.
Gentlemen:

Please find enclosed check for one hundred dollars as initial payment on a five-acre avocado grove. (If ten acres, two hundred dollars). It is understood that the balance of first payment, four hundred dollars, or eight hundred dollars if a ten-acre grove, is to be paid when I receive the contract and not later than thirty days from date. The balance is to be paid at the rate of \$100.00 per month on each 5-acre tract.

It is understood that this payment gives me the privilege of selecting a five- or ten-acre grove from either of your three plantings, Fort Myers, South Bay (the Everglades), and the Citrus Park planting.

It is also understood that I am to have the privilege any time during the two years of cancelling this contract and taking the amount that I have paid in citrus trees or avocados or other nursery stock.

Name _____
Number and Street _____
Town _____ State _____

There is every assurance that the Citrus Industry of this state is soon going to be on a firm substantial footing. The grower may expect fair prices for his product next winter and in the years to come.

The forward looking planter will therefore lay his plans to round out his acreage and right now reserve the choicest trees to insure his getting exactly what he wants.

"Glen Trees Grow"

Glen Saint Mary Nurseries Company

Winter Haven

Florida

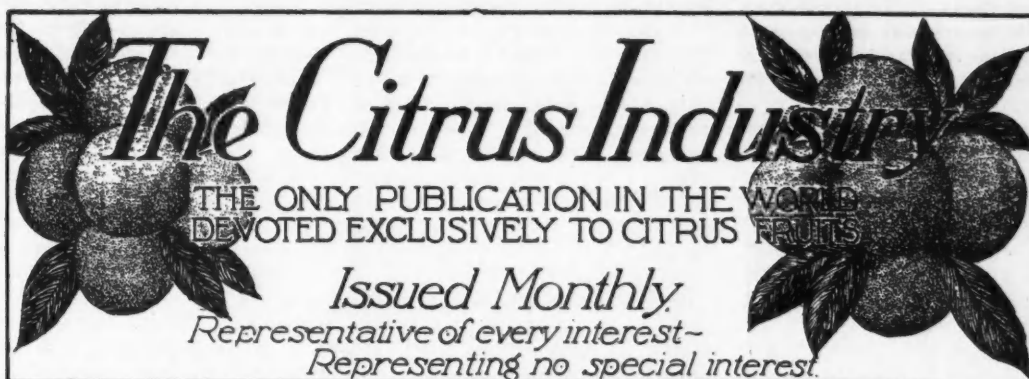
Glen Saint Mary

Over forty-two years of Satisfied Customers has made this the largest
Citrus Nursery in Florida.

L. C. EDWARDS

President Florida Citrus Exchange





Vol. 5

TAMPA, FLA., JUNE, 1924

No. 6

Citrus Fruit Growing in the Everglades of Broward Co.

By R. J. Blank, Secretary Chamber of Commerce, Fort Lauderdale

It is quite in keeping with its pioneer spirit that Davie, Broward County, the oldest permanent settlement in the Everglades, should boast the first commercially bearing orange and grapefruit grove grown upon the muck soil of this vast fertile area. When C. A. Walsh, editor and politician, turned his back upon the fertile plains of Iowa, in search of a climate with less strenuous winters, he became interested in the Davie section, the first considerable portion of the Everglades to be properly drained and available for cultivation and development. Following a number of winter visits here, beginning in 1908, he purchased along with other property in the vicinity of Fort Lauderdale, 10 acres of muck land, adjoining Davie on the west, along the south bank of the South New River Canal.

Firmly convinced that the muck lands as well as the high pine lands should produce high quality grapefruit and oranges, he announced, just nine years ago, his intention of proving his conviction by planting his ten acre plot in citrus fruit. His neighbors, particularly the "old Timers," long resident in this section, offered him little encouragement, regarding him as a theorist and impractical "Yankee," too hard headed to take advice. "Citrus trees won't grow in the muck," they said. When the trees were planted and showed signs of living, they declared the growth would be shortlived;



MR. C. A. WALSH
Pioneer spirit in citrus development of Everglades. Even men from the State Experiment Station discouraged his planting on muck land.

but the trees kept on growing. "Well they won't bear fruit," was the next general comment of the doubters and skeptics. But the trees blossomed and the oranges formed. Still unconvinced, or reluctant to admit their prophetic error, they maintained "the fruit will be tasteless and coarse, grown so rapidly on the muck." Mr. Walsh said little in reply but continued his scientific care and study of this Everglades Grove until last year, the

eight year since planting, when he had the satisfaction of seeing carloads of grapefruit and oranges from his grove top all California and Florida fruit on the New York market by \$2.00 and \$1.50 per box per car, respectively, indicating that the quality as well as the appearance of the fruit was the highest produced anywhere.

The most significant discovery and contribution to Everglades Horticulture made by Mr. Walsh was the practical demonstration that the rich soil needs no fertilizer nor cultivation, a veritable compost for a depth ranging from eighteen inches to several feet being ample plant food for the roots of the young trees. His ten acre grove, now coming into its ninth year, has had no fertilizer nor cultivation since the first year after planting. This grove is one of the most beautiful, most healthy and, according to Mr. Walsh, one of the best paying groves in the State of Florida. The overhead expense has been little since planting; the trees are unusually large, strong and thrifty looking for their age, and the heavy crop of late Valencias, Lu Gim Gongs and other varieties are still on the trees at the present writing.

A thoroughly scientific farmer, Mr. Walsh has kept a record or a life history, if you please, of each and every tree in the tract since the time of planting, including information concerning care, yield, etc. In its eighth

Six

year more than 4 1-2 boxes, tree average, of highest quality oranges were shipped, while the grapefruit trees produced an average of ten boxes of tip top fruit.

Over a period of three years past Mr. Walsh has conducted some inter-



C. A. WALSH
In typical work attire caught while tending his patients on his 540 acre citrus grove west of Davie in the Everglades.

esting and convincing experiments. Taking four tree plots of ten trees each as a basis regular applications of fertilizer were made as follows: the first plot received applications of 4-6-5 (4 per cent phosphoric acid, 6 per cent ammonia, 5 per cent potash); the second plot received an application of a 3-6-5 formula, the third, a 6-5 with no ammonia used, while the fourth received an 0-0-0 (no fertilizer). The records have been carefully kept and filed over a period of three years, and the most discriminating authorities are unable to detect any difference in flavor of fruit, volume produced, or in the appearance of the trees.

Unusual significance is attached to the larger projects of 540 acres to which Mr. Walsh is now devoting his attention. After nine years of pioneering, study, and research on his Davie farm, he is pinning his faith on the muck lands of the Everglades for extensive production of highest quality fruit at less overhead than could be produced elsewhere in the State. He has succeeded in interesting his friends, Crawford Fairbanks of Terre Haute, Indiana, and Thomas N. Stillwell of Anderson, Indiana, millionaire business men in this larger project. They have joined with him in forming

THE CITRUS INDUSTRY

the Walsh Citrus Company with C. A. Walsh, President and Manager. This is in no sense a development company. It is a significant fact that there will be no groves for sale, no land speculation—it is purely a crop enterprise. In discussing the matter with the writer, Mr. Walsh insisted that this point be emphasized. "I have nothing to sell," he said, "except the fruit; bear that in mind, there is no speculation."

Mr. Stillwell and Mr. Fairbanks have been coming to Florida and Fort Lauderdale for many winters largely for pleasure and recreational purposes. Being men of vision, they have carefully watched the progress made in drainage, reclamation, road and canal building to the Everglades. They know the incomparable fertility of its soil, and its vast possibilities. In addition they are life long friends of C. A. Walsh, have watched his Davie experiment grow despite floods and other disasters of the earlier days in-

to one of South Florida's finest groves, and do not hesitate to back the larger planting with their dollars.

The 540 acre tract now being planted lies along the south bank of the South New River Canal, 1 1-2 miles west of Davie. It is fortunate in its drainage with tributary canals paralleling its east, west and south boundaries in addition to the major canal on the north. Between 209 and 210 acres have been set during the past few months, 17,000 trees in all, divided as follows: 5340 Temple Oranges, 2644 Dancy Tangerines, 3204 Lu Gim Gong, 3204 Improved Parson Browns and Late Valencias, 2500 Marsh Seedless Grapefruit. Inability to secure nursery stock of varieties desired prohibited more extensive planting this spring. Next year, in all probability the planting will be completed, making a total of 50,000 trees, fully 10,000 of which will be Lu Gim Gong, to which Mr. Walsh is decidedly partial. All the trees used have come from sour orange



Close-up of nine year old trees in the Walsh grove. No fertilizer nor cultivation since the first year out. Picture taken May 10th. Lue Gim Gong tree in foreground.

THE CITRUS INDUSTRY

Seven

stock, the management refusing to plant trees from other stock.

A detailed log of the tract has been made. Muck soundings vary from sixteen to forty-nine inches with the average depth of the muck probably 30

moisture holding soil in the World." Cultivation of groves in many sections is largely in the interest of increasing the moisture. He has little to fear from drought on this mammoth Everglades grove.

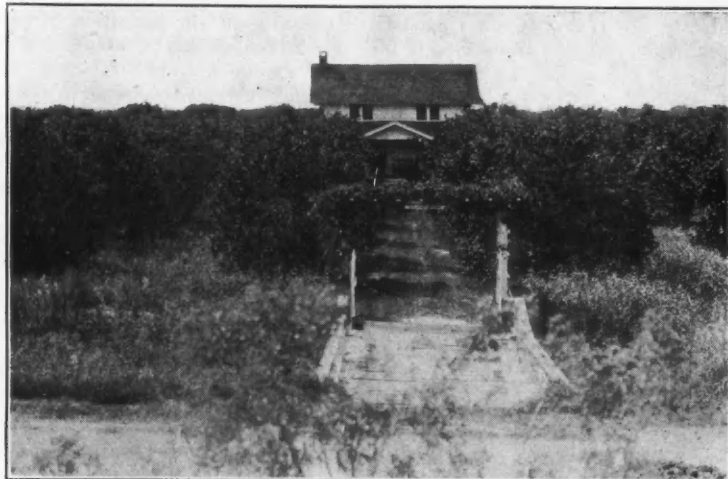
large tract to keep down the native grasses which spring up so rapidly in the fertile muck soil.

It is interesting to note that a series of experiments will be conducted over a period of four or five years upon the Walsh Grove under the most exacting, scientific direction. Cause and effect will be determined beyond the shadow of a doubt at the end of this extended experimental period. Despite his experiments on his mature grove one mile above, Mr. Walsh is taking no chances; there will be no guess work. The financial outlay is too great. Drainage conditions as well as bacterial action may be different, though only a mile above the original grove and apparently on identical soil. There will be ten different experiments conducted and the most accurate of records kept.

Ten different combinations using parallel tree plots will be selected. Cultivation with and without fertilization, and fertilization with and without cultivation will be tried. In addition a number of different fertilizer formulae will be tried without cultivation of plots, while at the same time an identical number of plots will be devoted to the same fertilizers with cultivation practiced.

No physician more carefully observes the condition of his patients than does Mr. Walsh each individual tree. No hospital record of a patient's case is more carefully kept than the history of the trees in this grove; and despite his many duties as General Manager of the great enterprise,

Continued on page 34



The Walsh grove on black muck land at Davie, Florida. Nine year old grove with Walsh home in center.

inches. Prior to a most devastating fire a few years since, the depth of the muck compost probably averaged five feet. In addition, Mr. Walsh, with the cooperation of the District Engineer's office of the Everglades Drainage Board, is sinking six test wells at various points in the new grove, equipped with gauges. Taking daily readings and recording them, he is able to tell the distance of the water level from the surface in any section of the grove at any time.

Visiting one of these wells at the northeast corner of the tract, we discovered the water level 29 inches from the surface. This is the lowest section of the tract. Water in the canal stands 2.7 feet above mean sea level. Referring to his pocket note book, Mr. Walsh gave the readings as taken in the morning from the other wells: four hundred feet back, from No. 1, 23 inch water; 616 feet, 31 inches; 1400 feet, 43 inches, indicating the exactness and care of the management in gathering all data of importance to the growth of the young trees. Gathering a handful of muck a few inches from the surface, even in dry weather such as was the day of our visit, Mr. Walsh was able to force the water from it. Selecting at random, a few inches below the surface, a number of handfuls of soil, he produced the same result, concluding with the statement, "This Everglades muck land, contrary to general conception, is the greatest

Mr. Walsh is firmly convinced that cultivation injures the quality of fruit produced, just as he long ago demonstrated to his entire satisfaction in the apple country of the north that the apples produced in the undisturbed or unbroken sods easily excel in flavor those from the cultivated orchards. "There will be no cultivation after the second year, I am positive" he declared. He does plan for the present to run a disc both ways through the



Mr. Walsh snapped while talking to R. J. Blank, Secretary of the Chamber of Commerce on his 540 acre Everglades muck farm. Discing with tractor preparatory to setting grove. Here the largest planting in the Everglades is going on; 210 acres set in spring of 1924.

Fumigation Checks Aphis

By R. W. Kelly, Southern Entomologist American Cyanimid Company

A series of experiments have been completed at Valrico on Fugazzi Bros. grove which demonstrate the killing power of Calcium Cyanide. All kinds of methods were used to kill the new aphis. Both power and hand dusters being used in the open on large and small trees. Tents were used for short time fumigation on smaller trees. Power dusters on larger trees were used in the open.

Early in the experiments it was found necessary to use some artificial means of holding the gas about the tree.

With wind and sparse foliage, the dust did not have time to generate a killing concentration before being swept away. To overcome this handicap a tarpaulin was thrown over a six year old tree and a puff of Calcium Cyanide dust applied with a power duster. It was allowed to remain covered for about ten minutes. After a day the treated tree was inspected for live aphis and none found. This effective demonstration led to further tests. Small tents from three to five feet in diameter and the same height were constructed for young citrus trees. With these tents the experiment began in earnest. Various amounts of Calcium Cyanide dust were applied and allowed to gas the aphis for various lengths of time. After many tests it was found practical to recommend a minimum time limit of three minutes for all sizes of tents. The amount of dust applied was found to depend upon the size of the tree. A tree three feet in height was effectively rid of aphis with three puffs of a hand duster; a five foot tent with

five puffs and so on. The time the tent was over the tree was three minutes in each case. A more practical method was to have an opening in the tent sufficiently large for the operator to see the cloud of dust entering the tent. A further check was the amount of Cyanide dust on the ground after the tent was removed. The soil under well dusted tents has a thin blue-

promises to fill a long existing need.

The original intention was to introduce open air fumigation in Florida to control the White Fly, Scale and similar citrus pests. For this purpose extensive experiments have been made at Orlando and practical methods of application will soon be made public.

The advent of the aphis has chang-



A close-up view of "gassing tent" in the foreground. In the background may be seen an operator shooting dust into the tent.

ish covering of the insecticide.

The killing agent which so effectively controls the aphis is Hydrocyanic acid gas. This gas is liberated by the action of the moisture of the air on Calcium Cyanide dust.

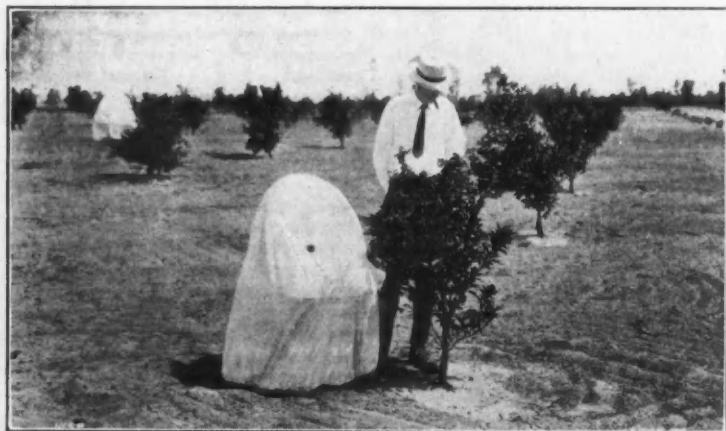
The action of this gas is not new on citrus trees as it has been used for this purpose in California for many years, in a liquid form. Its use as a dust, however, is of recent origin and

ed the original plans only in so far as this pest can be controlled along with the White Fly and Scale.

To control the rust mite and red spider, together with aphis and various other insects, a mixture of Calcium Cyanide seventy-five per cent and dusting sulphur twenty-five per cent has been put up and sold under the trade name "Citrus Dust." It was with this mixture that the experiments above mentioned were conducted.

In the tests at Valrico, a two acre plot of two year old Tangerines was selected as a test for kill and reinfestation. This small acreage was surrounded on two sides with five year old orange, on the North was six year old oranges and to the East was mature orange and grapefruit with dense foliage. The prevailing wind was from a westerly direction. On the West side of the test plot, the four year olds were heavily infested with aphis.

The tents were on hand at the test plot at noon May 20th. Experiments were begun at once. For the first preliminary check, three trees were dusted thoroughly in the open air with the hand duster. Then two trees



Mr. R. W. Kelley inspecting young citrus tree after removal of "gassing tent."

were dusted with four puffs and allowed to fumigate for four minutes under the tents. Various other dosages and fumigating periods were applied, such as two puffs, one minute; two puffs, two minutes; one puff, three minutes; three puffs, five minutes, etc.

Each tree was examined with a hand lens in from ten to fifteen minutes after the tent were removed. The first observations showed that the open air dusting kill a substantial portion of the aphids but not an economical portion. The dosage had been eight to ten puffs in contrast to the three to five puffs applied under tents. The minimum time limit for the trees under tents appeared to be

noon it was decided to fumigate the entire plot, using four puffs and three minutes. Four puffs were used as the majority of the trees were of suitable height for a four foot tent. The duster and tents were turned over to the workmen on the place and the tests concluded without the supervision of any experienced operators. After the work was completed the men conducting the tests returned to inspect the work. Upon observing the soil under the treated trees, it was found that the cyanide had formed a thin bluish covering beneath the treated trees. This residue, by the way, is ordinary slaked lime. A 100 per cent kill was obtained on the trees when this bluish color was dis-

within the tent as he applied the dust and the amount of calcium cyanide residue on the ground. The latter check is best observed by the man moving the tents ahead of the operator.

The same evening the test plot was irrigated with water to which nitrate of lime had been added, a few gallons to each tree. Two days later the test plot was inspected; new growth had started well. In some cases it had grown from two to three inches. The East side of the plot, away from the direction of the wind, was inspected for aphids. The new growth was clear, except for a winged adult here and there and ten or twelve young aphids. On the West side, near the badly infested trees, adult winged and young were found on nearly all new growth. Two days later or four days after the initial fumigation the test plot was fumigated again. No more water was applied. On May 31st, it was again inspected by experienced Entomologists. Again slight reinfestation was noticed on the West side. The new growth nevertheless was of good color and had no tendency to curl. The few young produced by the adult winged aphids had done no apparent damage at that time. It was of special interest to note that no foliage injury had resulted in any case, even when three applications of cyanide dust had been applied within a short time of one another. Every one following the test was interested in the actual number of ounces applied to the tree. It was first assumed that about one ounce was discharged with every puff of the duster. After three fumigations with four puffs applied to the tree it was found that close to two ounces had been used. This dosage (as properly checked by the amount of dust in the tent and the residue on the ground) had cost approximately 2 1-3 cents a tree.

The cost of labor was not representative in this test as only two tents were used. The workers were idle between dusting and the time to remove the tents. However, tests were conducted at the same time on other groves which demonstrated that two men and eight tents could treat from ten to twelve acres in ten hours. With this system one man dusted while the other moved the tents. The operation was continuous. By utilizing labor in this manner the labor cost was found to be from 4-10th to 1-2 cent per tree, according to the acreage covered.

Continued on page 32



A "fleet" of gassing tents fighting the new citrus aphid.

from two to two and one-half minutes. The more important observation was that the percentage of kill depended more on the dosage than on the time. This was explained by the fact that Calcium Cyanide liberates hydrocyanic acid gas almost instantly upon coming in contact with the moisture in the air. A certain concentration of gas was necessary to kill the aphids. This concentration was obtained by throwing the dust to all parts of the tent. For the three foot tent, three puffs kill one hundred percent when given a minimum fumigation period of three minutes. The four foot tent, four puffs and the five foot tent five puffs.

With the five foot tent two puffs and three minutes was found to stupefy the aphids. When such tests were observed with a hand lens, immediately after removing the tent, no movement of the aphids would be detected. Ten minutes later, however, the older forms would begin to stir. In this connection it might be added that in all cases the adult winged aphids were the hardest to kill. The minute young were the easiest. Later in the after-

noon it was decided to fumigate the entire plot, using four puffs and three minutes. Four puffs were used as the majority of the trees were of suitable height for a four foot tent. The duster and tents were turned over to the workmen on the place and the tests concluded without the supervision of any experienced operators. After the work was completed the men conducting the tests returned to inspect the work. Upon observing the soil under the treated trees, it was found that the cyanide had formed a thin bluish covering beneath the treated trees. This residue, by the way, is ordinary slaked lime. A 100 per cent kill was obtained on the trees when this bluish color was dis-

tingly noticeable. Further in the plot, some trees were noticed which did not have this covering of residue. Upon investigation it was found that the kill was not complete, live aphids were found on the new growth. The tent was secured and the fumigation repeated on these trees.

On these few trees the lack of a satisfactory kill brought out a very important point. The tents had been made with a ringlet for the duster pipe. This ringlet was just large enough for the duster pipe to enter. The operator was unable to see the dust within the tented area. At the same time the operator was inexperienced and had no hint apparently that the duster was empty. To eliminate this practical handicap, a large hole, a foot or more in length, was torn in the canvas along a seam. This permitted the operator to see his work. In this way it came about that the dosage recommended is not only so many puffs (that is naturally indefinite with various types of dusters and even different dusters of the same make), but is checked by the operator observing the cloud

Edwards Heads Florida Citrus Exchange

Lamaracus C. Edwards of Tampa was elected president of the Florida Citrus Exchange succeeding Dr. J. H. Ross of Winter Haven, who is retiring after ten years of service. Dr. Ross was chosen president emeritus, an honorary position, and other officers were selected as follows: Chairman board of directors, Erle L. Wirt of Bartow; first vice-president, F. C. Kramer of Leesburg; second vice-president, John A. Snively of Florence Villa; secretary, C. E. Stewart, Jr., of Tampa; cashier, W. T. Covode of Tampa. Mr. Edwards' name was placed in nomination by E. L. Wirt of Bartow. The only other nomination was that of Dr. W. A. MacKenzie of Leesburg, offered by Capt. F. C. W. Kramer of the same city. A secret ballot resulted in 12 for Edwards, 7 for MacKenzie, and 1 blank. Mr. Edwards' election was made unanimous.

Erle Wirt Chairman Board.

The choice of Mr. Wirt as chairman of the board of directors follows the creation of this office by last year's board. Captain Kramer's selection as first vice-president was also unanimous, after Directors D. C. Gillett, L. W. Tilden and John A. Snively requested that their names be withdrawn in his favor. The election of Mr. Snively as second vice president was without opposition. Mr. Stewart and Mr. Covode were similarly re-elected as secretary and cashier respectively. The election of Dr. Ross as president emeritus was preceded by numerous expressions of the esteem in which the venerable leader is held and of appreciation of his faithful work in behalf of the Florida Citrus Exchange. The motion that he be so honored was made by Senator John S. Taylor of Largo, and seconded by Josiah Varn of Bradentown. While he has fully determined to withdraw from the working staff of the Florida Citrus Exchange, Dr. Ross assured the board that he is still keenly interested in the complete success of co-operative marketing in Florida. The work of drafting suitable resolutions was assigned to a committee composed of John S. Taylor, chairman; John A. Snively and Josiah Varn and its findings will be engrossed in appropriate form for presentation to Dr. Ross at a later date. Another committee, composed of V. B. Newton, chairman, W. E. Lee and L. W. Tilden, was delegated to present Dr. Ross with an appropriate testimonial of some permanent character. The board and the large audience of growers warmly applauded the feeling re-



ERLE L. WIRT

marks in which Dr. Ross left the position he has so gracefully filled and acknowledged the kindly actions of the meeting.

The executive committee will consist of the chairman of the board, the president, and the chairman of the four permanent committees. The personnel of the four standing committees was agreed upon as follows:

Sales, V. B. Newton, chairman; Captain F. C. Walker, W. E. Lee, John A. Snively and John S. Taylor.

Advertising—John A. Snively, chairman; D. C. Gillett, Vet. L. Brown, J. S. Cadel and Lorenzo A. Wilson.

Ordinance—L. W. Tilden, chairman; E. P. Livermore, Edwin Parkinson, A. V. Anderson and E. L. Wirt.

Organization—F. C. W. Kramer, chairman; Lee M. Hammell, R. O. Philpot, W. W. Yothers, R. J. Kepler, Jr., H. E. Cornell, W. R. Lee, Josiah Varn, Homer Needles and D. C. Gillett.

Lorenzo A. Wilson of Jacksonville and Davenport was elected to serve as associate director. Changes in the organization's charter providing for an increase in the number of vice-presidents from two to four, recommended by the organization committee in a report by Chairman Gillett were approved. D. C. Gillett acted as temporary chairman and C. E. Stewart as temporary secretary. With the exception of R. J. Kepler, Jr., of DeLand, called home Wednesday night by illness in his family, all members were present.

President Edwards is a resident of Tampa, interested in the firm of Lee and Edwards, large citrus fruit shippers, and a member of the Thon-

otosassa Citrus Growers Association, and is considered to be one of the best informed and largest individual growers and shippers in the state. Mr. Edwards controls extensive citrus holdings in Hillsborough, Pasco and Manatee counties. Born in Georgia, Mr. Edwards has spent most of the past thirty years in this state. Prior to moving to Florida he was cashier of a Cordelle (Georgia) bank and also at one time was connected with the Dothan Lumber Company, one of the biggest organizations of its kind in the South.

The suggestion that Mr. Edwards be considered as president of the Florida Citrus Exchange is reported to have originated with a group of bankers, who are especially interested in the stabilizing of the citrus industry through the co-operative movement. The only other man voted upon, Dr. MacKenzie, was brought into prominence in connection with the Exchange presidency as a result of his work as chairman of the citrus sign-up day state committee. He has never indicated any desire for the position and no active campaign was made in his behalf, so that the handsome vote given Dr. MacKenzie is regarded as highly complimentary to him. The chairman of the board of directors, E. L. Wirt is active vice-president of the Polk County National Bank of Bartow, where he has lived most of his life, and also is connected with several other banks in that vicinity. He has large grove interests in the vicinity of Babson Park, Alturas and Frostproof, and holds memberships in the Citrus Growers' Association in each of these communities. He recently became known throughout state citrus circles as a result of the preliminary Bartow citrus convention, and the subsequent general state citrus convention at Orlando.

It is reported from France that the Merite Agricole is to be conferred on French families that have tilled the same soil for three centuries. There are 750 such families in France. One family has held the same land since the reign of Charlemagne. Another has worked its for a thousand years.

The farmer needs to practice better business methods; he should not lose sight of the fact that his is a business just as well as is the work of the banker or merchant.—Dean Wilmon Newell.

Kinds and Varieties of Fruit for the Home Orchard

Every home should have some fruit, whether there is much or little space available. Most of the lots in towns and cities have sufficient space for a few trees, and such space could not be made use of in a more profitable way than to set fruit trees on it, provided one will give them the proper attention. And there is no reasonable excuse for anyone in the country not having a home orchard of some size.

Fruit trees can be set in the South any time during the fall, winter or very early spring. Of course they will have to be set before the buds begin to swell in order to give them a fair chance of living.

When setting fruit trees for home use the selection of varieties is of utmost importance, because what one wants is fruit ripening over as long a period of time as possible. The commercial fruit grower usually confines his efforts to a comparatively few varieties. The varieties that are best for commercial growing are not always the best for home use, and as said above, it is of the utmost importance that the proper varieties be selected, whether one is growing fruit for home use or for commercial purposes.

Fruit Trees Will Not Stand Wet Feet.

The peach tree succeeds in practically all sections of the South, but there is one thing that a peach tree will not stand, and that is wet feet. Few, if any fruit trees will do this. Therefore one of the very first things to do is to see to it that the land where the trees are to be set is properly drained. A low, wet place is always to be avoided, unless, of course, it can be properly drained.

It is also important to select as far as possible for fruit trees, ground that is properly air drained, as well as water drained. It is a well known fact that cold air is heavier than warm air and settles to the bottom. Therefore wherever it can be done, select a high place of ground for the fruit trees, so as to insure as far as possible, proper air drainage. This will go a long ways toward preventing damage by late frost and freezing because it is always in the low places that are improperly air drained that the greatest damage from late frost takes place. Of course where one has

only a limited amount of ground available, it may not be possible to select a high place to set the trees, but this is the ideal that should be approached as nearly as possible.

Kinds of Fruit to Be Planted.

Now a little more as to kind and variety. In practically all sections of the South, one should have in the home orchard, some peaches, plums, pears, Japanese persimmons, grapes figs and in the extreme South mangoes and avocados.

The following varieties of peaches will give ripe fruit the entire summer season: Mayflower or Early Rose, Carman, Hiley, Belle of Georgia, Elberta, Heath Cling, and Salway or Krummel's October. By planting some of all of these varieties, ripe peaches may be had from late May or early June until late September or early October. The very early and the very late varieties are not very good as to quality but coming early or late, they are usually very greatly appreciated. Therefore for the home orchard, be sure to plant at least a few of the Mayflower or Early Rose, Heath Cling, Salway or Krummel's October. The Carmen, Hiley, Belle of Georgia and Elberta are well known, standard varieties that possess very high quality.

Plant Early, Medium and Late Varieties.

Of the plums, the Red June, Abundance, Wild Goose and Damson make up a choice selection for home use. The Damson is especially good for preserving, and the other varieties named to be eaten as fresh fruit. Where room can be given for only two varieties, Red June and Abundance will probably be the best, unless one especially wants some for preserving purposes. In this case use the Red June for eating purposes and the Damson variety for preserving.

The Best Pears to Plant

Pears blight to such an extent that only a few varieties should be planted in the South, except in the upper portions. In the lower part of the South the Sand Pear or Pineapple pear should be planted, as it is blight proof and is excellent for canning and preserving. The Kieffer, while not blight proof, is not so susceptible to this disease as the other varieties, and where

one does not wish to grow the Sand or Pineapple pear, the Kieffer is probably the next best choice. Other good varieties are Garber, Seckel and the Bartlett.

Except in the lower part of the South, every home orchard should have in it a few cherry trees. Only the sour varieties will succeed in the South. The Montmorency and Early Richmond are two of the best of the sour varieties.

One or two trees of the Japanese persimmon should be found in every home orchard in the South. It will succeed wherever the native or wild persimmon grows. The fruit is especially large, being as large as a good sized peach and is delicious. Tane Nashi variety is the leader.

By All Means Plant Grapes

Grapes will grow practically anywhere in the South.

In the middle and lower part of the South, figs grow well. By giving slight protection during the winter, they can usually be grown to advantage in the upper portions of the South. The two leading varieties for most sections of the South are the Brown Turkey and the Celestial. The Celestial is a small, sweet variety and is hardiest of all. Therefore in the upper part of the South, only this variety should be planted.

By planting the above varieties in the home orchard, one will have started in a way to secure ripe fruit from early until late, and that is what is desired. A superabundance of fruit during a short season of the year, with none at all during the early and late part of the season, is undesirable from every standpoint. By planting the varieties mentioned above, one will overcome this trouble and have a supply of fruit over the entire season. Certainly no home, where there is even a small amount of space available, should be without a few fruit trees. They are inexpensive, comparatively easy to handle, if one will only give the matter a little study, and will prove not only a pleasure but a profit to those who will give them the right attention in the way of pruning, spraying, cultivating and fertilizing.

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GROVE CALENDAR FOR JUNE

Some Timely Suggestions for Grove Work During the Present Month

Stop cultivating bearing groves when summer rains begin.

Finish fertilizing this month.

Plant bush velvet beans or cowpeas in the middles of young groves.

Prune out dead wood in citrus trees to control withertip.

Watch for rust mites on citrus and at the first appearance dust with sulphur or spray with lime-sulphur (1 to 70).

Spread the parasitic fungi to control whitefly and purple scale on citrus, especially on trees sprayed with bordeaux or bordeaux-oil.

Spray pecan trees with 4-4-50 bordeaux to control pecan scab; repeat every three or four weeks during the summer.

SHOULD GROW VARIETY

That Florida will continue to maintain its leading position in the production of citrus fruits, no well-informed citrus grower for one moment doubts. That Florida will increase its citrus production and improve the quality of its fruits, is equally a foregone conclusion. Many of the problems and vicissitudes which beset the citrus grower last season are being solved. More will be solved. There is general confidence in well-informed circles that next shipping season will prove much more satisfactory to the grower than the one just past. The citrus industry will continue to be the state's leading financial asset.

Nevertheless, The Citrus Industry believes that it is well for citrus growers to recognize the wisdom of diversification along horticultural lines. It is well for them to realize that Florida is not a "one crop" state—even in the matter of fruit production. They must realize, as the cotton planter and the corn farmer have been made to realize, the importance and the wisdom

of diversification.

Florida is rich in horticultural possibilities, and the citrus grower who has idle acres at his command is not acting the part of wisdom if he fails to avail himself of those possibilities by setting his idle lands to work growing avocados, mangos, grapes, bananas and other fruits which thrive on Florida soil and under the Florida sun, and for which an increasingly heavy market demand exists.

That avocados, mangos, bananas, grapes, loquats and other fruits for which there is ever a ready sale at remunerative prices, will grow and thrive in Florida has been demonstrated beyond doubt. These fruits have passed the experimental stage. They are of known merit and have an established demand. Nurseries for the propagation of adapted stock have been established and plants for transplanting on commercial scale are now available.

While primarily concerned with the success of the citrus industry, this magazine believes that the wise citrus grower is the one who devotes his surplus or idle acres to the cultivation of other sub-tropical fruits. Even the citrus specialist will lose nothing by placing a few eggs in some other basket.

BEAUTY THAT PAYS

Throughout Florida more or less interest is being taken in beauty that attaches to landscape, to trim, clean, spic-and-span grounds around residential and business properties, and public roadways that have been beautified by the clearing away of under-brush, rubbish, including advertising signs, and in place thereof planting and maintaining flowers and ornamental trees and shrubbery, says the Jacksonville Times-Union. "What's the use," asks some doubter. "Why waste time and money for beautification?" asks another.

Beautification does pay. There is abundant evidence that this is true. It is so asserted, by beautification advocates, in Florida and elsewhere. Quite recently a Maine newspaper, the Lewiston Journal, said:

"When in Williamstown this past week we heard a criticism of a Maine college 'if it would only sweep the leaves off its campus and make its loveliness more apparent' was the comment. 'I would not like to send a boy to a school that did not care for its lawns.' Riding through the country-side we estimate the thrift of towns by their neatness. The town advertises itself by its own housekeeping. It pays in business, homeseking, desirability, as a place of residence. There are in Vermont certain country places that have no other commendation to the summer visitor except their specklessness. Their homes are desired and rented. In such places as Great Barrington, Lenox, Manchester, Vt., the residents are able to take summer vacations away from home; renting their own homes at fabulous prices to summer visitors, solely because these cities and towns regard cleanliness, beauty and good care as paramount."

Florida caters extensively to visitors. Three hundred thousand of them, it has been estimated, were in the state last season; there are likely to

be more during the season now opening. They come here, mainly, for pleasure. Isn't it likely that they will be all the more pleased if they find the natural beauty of Florida enhanced by the elimination of whatever is not beautiful, that is unsightly? And as those now coming to visit Florida have their pleasure enhanced, is it not reasonable to suppose that they will tell their friends of the many delights and that with every recurring season more and more visitors will come to the state, many of them to become permanent residents. Will it pay? Why, of course, it will. Beautification will have to be credited for helping to bring here many of the increased number of visitors, and their expressed satisfaction.

Of course, it is not intended to create the impression that beautification alone will be responsible for bringing more and more people to Florida. But it will go very far in that direction. Almost every person of intelligence prefers to look on that which is beautiful, only a very few being satisfied with ugliness. In the beautification of grounds and roadsides there is, then, an asset of very considerable value, and it is not only for the pleasure of visitors, but for home people as well.

This beautification work, that is spreading throughout Florida, pays and in more than a mere money sense.

HOLLAND WANTS AMERICAN FRUIT

Special attention is being given Holland as a market for American fruits, the imports into that country during the first three months of 1924 having increased greatly over those during a similar period of 1923. Fresh and dried apples, prunes, sultana raisins, show the largest gains, according to a report to the Department of Commerce from Consul General George B. Anderson, Rotterdam. The record for the whole lot of last year, which was much larger than 1922, was not so sensational as that for the first three months of the current year, but it has resulted in material increases in the sale of American fruits in that market under conditions which indicate permanence if the trade is properly looked after. The record of accomplishment in the raisin trade is in some respects the most significant of the entire list. Under the stimulus of favorable price and trade conditions in the United States, American raisin exporters commenced an intensive sales campaign of American sultanas in Netherlands during the latter part of 1922. This was continued into 1923 with excellent results and apparently the trade is now well established. The dried apple trade has been mostly American and Canadian for many years and its volume depends largely upon prices in the United States and upon the size of the fresh apple crop in Holland and neighboring countries. There is always a large demand for dried apples, not only in Holland but in the German hinterland and in Central Europe generally. The ups and downs in the prune trade also have depended largely upon European conditions rather than any special failure of American exporters to cultivate the market. The sale of more American fresh fruit in that market is only a matter of intelligent marketing. There has been a large increase in the imports

of American oranges and other citrus fruit during the first quarter of this year. The increase in the imports of American oranges has been large while the imports of American grapefruit have become so large that practically all fruit dealers in the larger cities of Holland now regularly carry stocks of this fruit—a thing unheard of two or three years ago.

IT PAYS THE YOUNG FARMER

"In dollars how much does education increase the earning capacity of the young farmer?" is a question asked by the U. S. Bureau of Education. Some of the State Agricultural Colleges are publishing figures in answer to this question.

The Georgia Agricultural College collected the facts from 1,271 farmers of that state and found that those who had no schooling earned on an average of only \$240 a year, those with a good common school education earned \$565 a year and those who had completed a high school course earned an average of \$664. The men who had completed an agricultural short course earned \$896 and those who had graduated from the agricultural college were earning an average of \$1,254 a year.

The Kansas Agricultural College had 1,237 reports. The average young farmer with a common school education earned \$422 a year, the high school graduate \$554. The men who had taken the short course in agriculture earned an average of \$859 a year, and the college graduate \$1,452.

No paper read at the recent meeting of the Florida State Horticultural Society attracted greater interest or received wider publicity than the paper by R. E. Skinner on Citrus Root Stocks, printed in the May number of The Citrus Industry. This paper has been reprinted in many of the leading papers of the state.

Avocado planters are now entering the development field with a view to selling acreage plantings after the manner so popular with citrus development projects. Mr. C. E. Thomas of Tampa is the first to enter this field on a big scale.

Next month the grape growers of Florida at their convention in Lakeland, expect to show themselves and all Floridians what the state has already achieved in the production of superior quality grapes.

Those lower rates on grapefruit to the West and Northwest should be of material aid to Florida growers in disposing of their fast increasing crops to better advantage—and greater profit.

The "new aphid" took us by surprise—but there seems now to be promise that his life will be short and his operations quickly curtailed.

Last year the buyers not only had the citrus growers at their mercy, but they had us scared. Next season, if we are wise, they will do neither.

"Gassing" as a control for insect pests is comparatively new to Florida. Like other new brooms, let us hope that it may sweep clean.

Will Florida Become the Greatest Grape State?

By Harold Lyman Wall

Setting out recently to look into frequently received reports that the growing of grapes in Florida is rapidly becoming a business that must be reckoned with, I was rather astounded to find out the things that have already been accomplished, and further, what this industry promises to mean to the future horticultural economy of the State.

To begin with, I admit frankly that I have been skeptical in believing that bunch grapes could be successfully grown on a commercial scale in this State. Someone once said so, and for some reason the idea stuck. Of course I knew that wild grapes of several varieties grew promiscuously throughout Florida, but not until recently did I know that these wild vines were used in breeding the adapted and resistant bunch grapes now grown in nearly all parts of our State. Plant breeders have crossed the pollen of the wild grapes with the finest varieties of European grapes and from this cross pollinization produced many fine types and varieties of grapes which are entirely suitable for southern planting and production. The infusion of the hardy blood of wild grapes accounts for the success of the planting of hybridized varieties.

During the course of my "investi-

gation," I hobnobbed with many of the small vineyardists, and from them learned many interesting facts. Also I consulted some of the best qualified experts in the State for technical advice. As I wandered among the arbors of the "little fellows" and down the long rows of bearing grape vines of the largest vineyard in Florida, I found out that we not only can and do grow very fine table grapes, but that along this line we are in a very enviable position as compared with any other state in the Union.

To start out right I sought out Col. H. T. Fisher, of Eustis, who is president of the Florida Grape Growers Association, and inquired of him the prospects of developing a big grape industry in Florida. Col. Fisher was decidedly busy attending to the constantly increasing amount of work that has been thrust upon him as head of the grape growers of the State, but he answered by questions. "Will we develop a large grape business in Florida?" he exclaimed, "why my greatest concern is that the machinery of the Florida Grape Growers Association will not keep pace with the grape development. We are now preparing to receive into our organization thousands of new members, and are striving to provide a smoothly functioning organization which will be

capable of properly handling the problems brought to us by the grape growers, and which will be so constituted as to render efficient service when called upon."

Col. Fisher took time to show me his fine bearing vineyard and pointed out the different varieties of grapes that he is producing. "Good grape land should be well drained," explained Col. Fisher, "and should contain a fair amount of humus. There are thousands of acres of almost ideal grape land in Florida on which can be produced the finest quality of grapes. We have passed the stage of experiments and the grape industry but needs statewide recognition in order to take its rightful place among Florida's horticultural developments." Col. Fisher explained that the vineyardists have decided to have an exhibition of grapes in Lakeland during the early part of July, and showing me some reports, said, "Take a look at these reports from Mr. Burnham, chairman of the Exhibition Committee. They are evidence of the enthusiasm of growers regarding the prospects of Florida grapes." From the reports I gathered the impression that the Lakeland Exhibition is going to be a hummer and well worth seeing.

In Lakeland I stopped to see Mr. Burnham. I discovered that he has made a very thorough study of the grape industry in Florida through discernment resulting from long association with the grape business in the north, and also has personally surveyed many of the vineyards in Florida. In answer to my inquiries Mr. Burnham said in part. "Comparatively few people in the State realize what great steps of advancements have been made in the culture of grapes in the last two or three years. Almost unnoticed, practically unheralded, the grape industry has spread from one county to another. Some of our finest vineyards are located far from advertised trails, and thus the fact that a new industry of much importance has been born and reared to a noticeable stage has escaped the attention of the hurrying public. But we are now preparing to bring to one place many different varieties of grapes grown in Florida and from as many counties as possible—



Grapes growing in the nursery of the Southern Adapted Nurseries near Bartow.

THE CITRUS INDUSTRY

Fifteen

then we may say to Florida with humble pride, "Here are thy fruits, look at them and partake."

"Twenty-two counties are expected to exhibit," continued Mr. Burnham, "and from them there will be perhaps forty different varieties of grapes. This Exhibition will be the first of its kind ever held in Florida, and we ex-

And so on Mr. Lockwood exposed drawer after drawer to view, in which recording cards were arranged so that important data regarding their many prospective customers and past purchasers could be quickly seen. As I glanced over them Mr. Lockwood explained, "It is a part of our service bureau to advise growers of the state

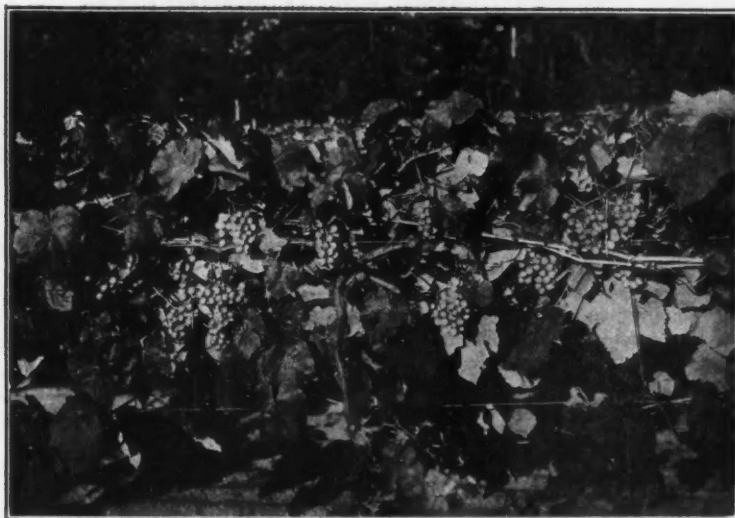
grapes.

My visit to the Southern Adapted Nurseries one hundred acre vineyard just outside of Bartow was indeed an interesting and instructive visit. The long rows of grapes, trellised under either the Munson or Kniffin systems, were a delight to the eye, and from every vine there were bunches of grapes hanging in what seemed to me great abundance. On some vines I counted as many as sixty well-developed bunches. I learned that in this vineyard over fifty varieties of grapes are being produced, but the Nurseries do not recommend all of these varieties for general Florida plantings.

"It is necessary," said Mr. Lockwood, "for us to grow many varieties for test purposes, but unless we demonstrate to our own satisfaction that we are warranted in recommending certain varieties, we do not propagate the plants. All varieties that are commercially successful are represented in our vineyard, and it is from these plants only that we reproduce nursery stock."

As I walked over the big vineyard with Mr. Lockwood and Mr. Gardner, the latter being the company's horticulturist, they pointed out the characteristics of the different varieties and explained their "likes and dislikes." One of the most essential features of a vineyard, I found out, is in the proper selection of varieties to harmonize with the soil and topographical conditions. Although there are many varieties which are successfully cultivated in Florida, it must

Continued on page 26

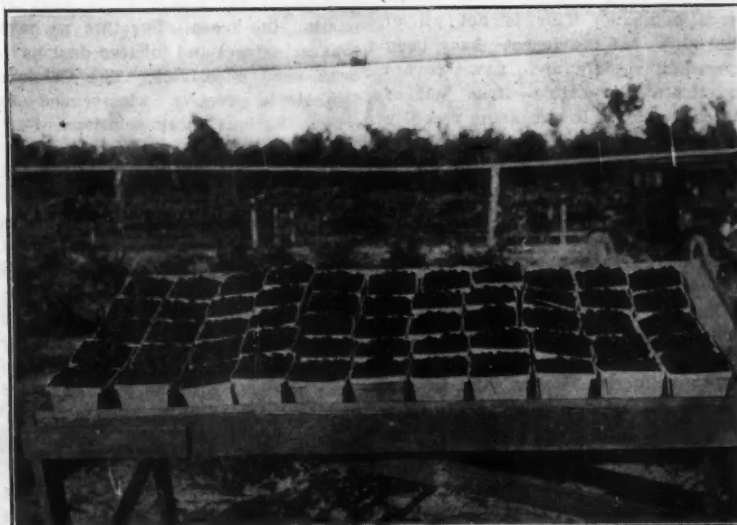


Florida grown grapes ripe and ready for market on the first day of June.

pect a great many people to become convinced that grape-growing is truly a Florida business. Also there are many citrus growers who have stated that they expect to attend the convention, and we take this to mean that citrus men are looking for more than one basket in which to keep their eggs." Mr. Burnham related many interesting things about the development of grapes, but I must journey on to my next stop, which was the Southern Adapted Nurseries, of Bartow.

Arriving in Bartow I was directed to the offices of the Southern Adapted Nurseries. After getting acquainted and making known my mission, Mr. T. G. Lockwood, General Manager of the company, said to me "Now before taking you out to see our vineyard, I would like to show you some of the large developments planned for the next planting season. Here is one company, backed as you can see by some of Florida's well-known business men, which has a large tract of land ideally situated and comprised of as fine grape land as there is to be found. They plan to develop and plant it in five and ten acre tracts for re-sale purposes. Here is another which has thousands of acres of very good land, much of which is to be planted to grapes this coming year."

regarding the many problems which they encounter. We so index our cards as to be able at a glance to know what the customer has purchased, type of his land and any other matters vital to the operation of our service department." From a study of these cards I began to realize how many people were planning either commercial or home planting of



Home grown Florida blackberries boxed and ready for market.

Growers Must Fight New Citrus Aphis

Citrus Growers of Florida are advised to take immediate and energetic steps to fight the new Citrus Aphis which has caused the growers considerable concern during the past few weeks. This was the decision arrived at by a committee of the Florida State Horticultural Society, consisting of H. H. Hume, Chairman, and Messrs. J. C. Chase, L. B. Skinner, W. J. Krome, D. C. Gillett, and Wm. L. Wilson. The aphid situation is so serious that this committee held a special meeting in Jacksonville and had in conference Mr. W. W. Yothers, of the Bureau of Entomology and Messrs. Wilmon Newell, J. R. Watson, A. H. Beyer, E. W. Berger, and Frank Sterling, of the University of Florida Experiment Station, Gainesville, Fla. As a result of their deliberations, the committee has issued the following report and urgent recommendations to the citrus growers of the state.

Insofar as is known this is an entirely new species of aphid that has not infested citrus trees in Florida heretofore. Every indication points to its being an introduced species from some foreign country. Every effort is being put forth to discover its origin and to identify it.

In the counties of Pinellas, Hillsborough and Polk it has done a great amount of damage to the foliage and fruit of both old and young trees. In some cases it has killed small trees outright. This is not all of the story, for the insect has been spreading rapidly and now covers practically the entire citrus belt of South Florida. In the areas recently infested the insects are still scarce and unnoticed by the growers, but it is the opinion of the entomologists that the insect will prove just as destructive in these areas as in the sections where they have been present for several weeks. The insect attacks the young growth particularly and the leaves are seriously curled. After the leaves are half grown the insect ordinarily leaves them. In some cases the injury to the fruit is so severe that little bumps or protuberances cover the entire rind. In many instances a large part of the fruit has already fallen from the trees.

There is a question in the minds of

the growers whether the injured fruit outgrows the rough spots on the fruit caused by the new species of aphid.

"Nest Plants."

This Aphis has been found to infest all varieties of citrus, but is especially injurious to varieties of the Mandarin family. It is next injurious to the sweet orange and lastly to the grapefruit. It has been found on loquats, Night Shade, Mexican Rose, Jerusalem Oak, Milk Weed, Dogfennel and Cudweed.

Parasites and Predaceous Enemies.

Thus far the most important predaceous enemies to this pest are four species of Lady Beetle, Syrphus Fly larvae and Lace Wing Fly Larvae. While these do a great deal of good so far they have not been able to control the pest because of lack of numbers. Thus far none of the wasp like parasites which are effective in controlling other aphids have been found to attack this new aphid to any appreciable extent. Experiments with various methods of killing the aphid have been carried on persistently and in the most energetic way ever since the pest was recognized as a new insect, this having been done by the Bureau of Entomology and by the Florida Experiment station, with the result that a number of treatments have been found to give a very high percentage of mortality among the aphid. The most effective method of control so far seems to be that of dusting the trees. For this purpose tobacco extract and tobacco dust have been used effectively. The Calcium Cyanide is effective when used in tents. Various spray solutions of tobacco extract, oil emulsions, soaps, etc., are very effective in killing all insects pests reached, but does not get into the curled leaves as well as the dust. Oil Emulsions usually used for White Fly and Scale insects are very effective in killing this pest when used at the same dilution as for the other insects. Lime Sulphur solution as ordinarily used for killing Rust Mite is also very effective if nicotine is added 1 to 800. It is suggested that Nicotine Dust be added to the dust used in controlling Rust Mites. At the present time the Aphids are distributed irregularly over the groves, being confined mostly to the

trees which are showing the June flush of growth. It is urged that the growers spot dust or spray their groves by giving special attention to these infested trees. It is felt by this method, the numbers which will later attack the June growth will be greatly reduced. In groves where active means have been taken to combat this insect it is evident that much new growth has been saved.

CULTURE TUNG-OIL TREE TOLD IN NEW BULLETIN

A new industry promises to rise in Florida. This is the production of tung-oil nuts, from which is extracted an important ingredient of paints, varnishes, paint driers, oil-cloth, a dressing for leather, fire proofing and water-proofing material, etc.

The tung-oil tree is a native of China, but was introduced into this country nearly 20 years ago. Plantings were made in this state in 1906. Several trees were set on the grounds of the Florida Experiment Station in 1912. At the present time there are nearly 40,000 trees in Florida, one grove at Gainesville consisting of about 270 acres.

From the result of investigations by Experiment Station authorities, Director Wilmon Newell has written a bulletin which he has entitled "Preliminary Report on Experiments with the Tung-Oil Tree in Florida." It places in condensed form practically all the available data on this promising industry, from the standpoint of production, harvesting, marketing and such information as the layman desires to know regarding the use of the nut in manufacturing.

The bulletin (No. 171) may be secured upon request to the Experiment Station, Gainesville.

"A forest saved is a forest raised—prevent forest fires."—Slogan of the American Forestry Association.

Never yet has there been a hot dry spell that was not broken in due time by cooling thirst-quenching rains.

Doc. Hiller says: Some people mistake the hurry and noise they make for efficiency.

In writing to advertisers, please mention *The Citrus Industry*.

Sunniland

TRADE-MARK

A Nation-Wide, Sane and Efficient Distribution of Florida Citrus Fruit is Necessary for Proper and Profitable Results to the Florida Growers.

For forty years CHASE & CO. both as grower and marketing agent, has realized the truth of this statement and has worked at all times to this end.

Chase & Co. was the first to introduce and sell Florida Grapefruit in practically every Western market now using the Florida Grapefruit.

Most of the markets which use Florida Oranges received their first supplies from Chase & Co.

We pledge ourselves to continue this work of widening the distribution of and increasing the consumer demand for Florida citrus fruit.

Chase & Co. originated in Florida the f. o. b. sales plan, has always given preference to this method of selling and will continue to do so.

Chase & Co. stand ready to join with other marketing agencies in putting into effect in Florida constructive methods which will build up the f. o. b. market to the advantage of the grower and the industry.

Specializing in Florida products, our general trade-mark, *Sunniland* being used exclusively on Florida fruits and vegetables, maintaining in the markets and in Florida the valued reputation of fair dealing and avoidance of misrepresentations, the expansion and strengthening from year to year of both field and sales forces—not in a "mushroom growth" way but conservatively and consistently, building for strength and permanency—enables CHASE & CO. to offer the Florida Citrus Growers unexcelled Sales Service in the marketing of the 1924-25 crop.

CHASE & COMPANY

Marketing Agent for Individual Growers and for Growers' Associations.

MAIN SALES OFFICE—JACKSONVILLE, FLORIDA

(After July 1st, 1924, at Orlando).

Bonded Agents in Principal Markets Throughout United States and Canada.

Sunniland

TRADE-MARK

Summer Drinks From the Grove

By Wm. R. Coon, St. Petersburg

Picking time is long past but your grape-fruit trees still hold some fruit which, though perhaps unmarketable, contain a goodly amount of juice. Our summer weather has come and we feel the need for an increased amount of drink, that our moisture income may equal the outgo, thus maintaining our bodily equilibrium. Then why let this fruit juice go to waste when old Sol is continually saying, "drink, drink, and drink."

Water is undoubtedly the ideal drink. But always water gets awfully monotonous, tastes flat and eventually 'gets our goat.' So let us see if we can't work up some of the juice of the aforesaid grape-fruit into a happy and healthful drink.

Get some heavy pint bottles (those round thick ones like Cliquot ginger ale comes in are the best) at any grocers or soft drink stands at 35 cents a dozen or less, crown bottle caps at bottling works or ten-cent stores at 30 cents a gross, and a capping device or machine at anywhere from 10 cents to \$3.50. (This latter is also a very handy thing to use for syrups, catsup, relish, etc.) It seems hardly necessary to remind that bottles should not only be thoroughly washed but sterilized with boiling water. Having extracted your juice you are now ready to proceed thus:—

Grape Fruit Juice, 3 ounces.

Water to fill bottle or, 13 ounces.

This is a base recipe to go by which may be modified in different ways as I will show later. But keep this in mind—do not attempt to increase the quantity of juice to the bottle, and do not add any sugar. The reason is, that doing either would raise the pressure of the gas generated to the danger line. Also the beverage would become an illegal one.

Before putting the cap on we will—if we intend to keep it any length of time—pinch the head out of a good fat clove and drop it (the head only) in the bottle. This will prevent any mold forming on top of liquid, which, while harmless, is somewhat unappetizing in appearance.

After bottling it will be ready to drink in from 3 to 5 days and will keep through the summer if kept in a fairly cool place. When ready to

drink there will be quite a high gas pressure inside the bottle which, while it gives the beverage its sparkle and zest, necessitates intelligent handling. Never allow bottles to stand in the sun and always have it ice-cold before opening. It is not advisable to allow young children to handle the bottles before they are opened.

Modifications—In place of grape-fruit juice the following may be used.

1. Grape fruit juice 2 ounces and Grape juice 1 ounce.

2. Grape Fruit juice 2 ounces and Loganberry juice 1 ounce.

3. Same as No. 2.—with a drop or two of almond flavoring added; this gives a cherry flavor.

If you are so fortunate as to have some muscadine grape juice, use it by all means as nothing can surpass. But remember your juice must not have any added sugar in it. You may use the loganberry juice that comes in bottles or get the dehydrated berries and boil them up into juice, remembering to add no sugar.

Ginger water may be used instead of plain water and many prefer it. To make it, add some powdered Jamaica ginger to boiling water and let simmer for five minutes, then let cool and pour off the clear liquid. Or you may add a few drops of the essence to each bottle if you prefer. Cold tea may also be used instead of plain water.

If one desires a sweetened drink, pour about one ounce of syrup, plain or fruit, in a glass and pour the iced beverage over it and stir up with a spoon. Fruit syrups are especially made by using one cup of the fruit juice to each two cups of sugar, warming if necessary to dissolve. To make orange or lemon syrup grate the outer (oil bearing) part of the peel off, and to half a cup of the gratings add four cups of sugar. Work thoroughly together with a potato masher and add two cups of water. Dissolve without heat and strain. This is prone to change but will keep a reasonable length of time in the ice box.

I haven't mentioned the orange as a source of juice, simply because, that while orange juice while fresh is truly a nectar for the gods, by itself or in mixtures, it rapidly acquires a dis-

agreeable flavor. Anyone who will devise a process for holding unpaired flavor of fresh orange juice, will not only have conferred a blessing upon humanity but will have discovered a veritable gold mine.

REDUCE FREIGHT RATES ON GRAPEFRUIT TO NORTHWEST

Railroads have slashed rates on Florida grapefruit shipments to northwest Pacific Coast points approximately 15 cents per crate, and around 20 cents per box on shipments to Denver and Salt Lake City.

The 15 cents per box reduction on shipments to the northwest, it is stated, is based upon a carload minimum of 30,000 pounds or about 353 crates. This amounts to a saving of approximately \$53 per car on northwest grapefruit shipments, it is pointed out.

Reductions on shipments to Denver and Salt Lake City, it is said, also extends to shipments to California; but inasmuch as Florida fruit is barred from that state, it will be applicable to the two cities only.

This reduction amounts to around 20 cents per crate, it is said, and will net a saving of approximately \$80 per carload to these two points.

These reductions are due to a conference held in Jacksonville last February by executives of Florida railroads, and to activities of the western trunk line officials who have felt that to reduce rates to the northwest would materially increase shipments of Florida fruit over their lines.

THRIPS ON ROSE BUD CAN'T STAND TOBACCO

Rose buds frequently fail to develop properly. They turn brown, at least in spots, and the petals fall off prematurely. If such buds are examined carefully they will be found swarming with minute yellowish brown insects about a twenty-fifth of an inch in length.

This insect is known as the Florida flower thrips, according to specialists of the Florida College of Agriculture. It attacks a large number of flowers, and is especially severe on roses, citrus and tomatoes. Spraying with tobacco extracts is the common rem-

edy.

Such extracts vary in strength. Nicotine Sulphate is highly concentrated and is used at a strength of 1 parts to 1000 parts of water. If one has only a few rose bushes, the following will no doubt be found convenient and efficient.

Use the tobacco extract as mentioned and make a strong solution of soap suds, or pour a little kerosene into a bucket half full of water. Go over the rose garden carefully and cut off all the roses with a pair of scissors, allowing them to drop quickly into the bucket. Disturb the blossoms and bushes as little as possible while doing this, so as not to scare the insects away. Pick off all the blossoms and buds that have opened at all. Then look over the patch and pick all the buds that are about to open. Those need not be destroyed, but they should be carried out of the rose garden. In other words, pick the entire rose crop thoroly, taking care not to scare the thrips away. Apply the remedy once a week.

MARKETING SERVICE

PAISED BY DEALERS

Produce growers through the Mobile territory are rapidly availing themselves of the market news bureau service recently inaugurated at Mobile by the United States Department of Agriculture and the Alabama department of agriculture, it was learned yesterday. Within the last two days, J. D. Evers, market news expert in charge of the station here, reports a volume of inquiries from growers who desire to be placed on the mailing list for the daily bulletins.

Mobile produce dealers appreciate the service offered them. Utterances from Commerce street indicate that the service giving accurate prices for eastern markets, will do away with buyer's alleged trickery to a large extent.

Buyers have read fake "telegrams" from the markets in an effort to beat down prices and buy as cheaply as possible, dealers said, but the market news bulletins, issued by government experts will eliminate this feature, declared produce experts.

Mr. Evers came to Mobile from Orlando, Fla., where he had been furnishing information to Florida citrus growers.

Good crops and fair prices are the foundation of every sort of business prosperity.

In writing to advertisers, please mention The Citrus Industry.

GAS 'EM

With

Aero Brand Citrus Dust

Calcium Cyanide — Sulphur Mixture

A positive control for the

NEW APHIS



Under home made tents—3 to 5 minute fumigation—with Citrus Dust has shown 100 per cent kill on the New Aphis. This positive control has been developed after extensive tests on young groves.

The killing agent in Citrus Dust—Hydrocyanic Acid Gas—is given off on contact with the moisture in the air. The residue is slaked lime.

The New Aphis on large trees is effectively controlled by open air fumigation. Additional treatments may be necessary to permit the new growth to harden.

Citrus Dust, with this adaptation to Florida conditions, is economical. The material cost has ranged from 2 1-2 cts. to 3 cts. a tree. Two men operating eight tents continuously can fumigate ten to twelve acres daily.

Sulphur is present in Citrus Dust to control the rust mite and red spider. The Calcium Cyanide also controls the White Fly Adult and scale insects.

See Your Dealer and Write for Booklet No. 9 To-day.

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Branch Office 301 State Bank Building.

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Brewster, Florida.
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Azusa, California.

Warehouses
Brewster, Florida.
East St. Louis, Ill.
Kansas City, Mo.
Spokane, Washington.

The Aphis Situation

By J. R. Watson

At this date (May 20) the new citrus aphis is decidedly less abundant than a few weeks ago. Nevertheless, much of the new growth that is coming on is becoming infested with the winged adults, and indications are that much damage will be done to the June flush of growth. Our knowledge of this new pest is so scanty that any prophecy concerning its future is hazardous, but it looks as if the present is a particularly good time to deal the pest a blow, while they are confined to the new and tender growth and not generally distributed over the trees.

The experience of Mr. A. H. Beyer, Assistant Entomologist of the Experiment Station, who is devoting his entire time to this new pest, is that the most efficient insecticide is nicotine sulphate lime dust. On small trees it seems that this is best applied, not with a power duster, but with a good hand duster. One applying the dust can work all around the tree and dust it from all directions, being especially careful to get in a good blast from near the ground upward. By this method the dust is more apt to penetrate the curled and crinkled leaves where the aphids are than if applied with a power duster from one side of the tree only.

Spraying with lime sulphur and nicotine sulphate solution or oil emulsions, have also given good results. These have the advantage in that they will control other pests as well. The time is now at hand for spraying groves with oil emulsions for whitefly and purple scale. We advise this method of combatting the aphid in groves that need spraying for scale and whitefly. In groves in which rust-mite is appearing, spray with a solution of one part of nicotine sulphate to 800 parts of standard lime sulphur solution would be advisable.

The new aphis is particularly destructive to citrus of the tangerine type (Cleopatra tangerine seedlings), Temple and King oranges, tangelos, etc. Even if one does not spray or dust his entire grove it would be well to give particular attention to these varieties.

The parasites are working on these aphids. Lady beetles, both adults and larvae are present in all the groves and doing good work. In some sections the syrphus fly larvae are doing even better work, and in other sections they seem to be almost en-

tirely absent. Fungus and perhaps bacterial diseases are also working on the new aphids. We hope that they will do even better work as the rainy season comes on. However, if the wasp-like parasite that ordinarily helps so much in holding the melon aphid in check, works on the new aphid at all it is to an extremely unimportant degree.

A comparison of the growth in most of the groves which have been carefully sprayed or dusted with those in which no work has been done, indicates that the dusting has saved a great deal of new growth. Complaint is made by many growers that altho they have dusted several times they have just as many aphids as before. This is not a true test of the efficiency of the control measures. The test is the amount of good, healthy growth they have been able to save as compared with untreated groves. Applying this test it is evident that most of those who have adopted careful control measures have been repaid for their troubles in spite of the fact that in all cases observed control measures were undertaken too late to be as efficient as they should have been.

It has been definitely determined that the new aphis is not the Italian aphid *citricola*.

GROWERS HAVE DEVELOPED METROPOLITAN MARKET FOR CITRUS FRUIT

The Bank of America, New York, Finds Growth of Market for Oranges and Grapefruit There is Due to Better Methods of Production and Shipment.

With the market for citrus fruit in New York City steadily increasing, and the orange already established as the favorite fruit of the great city, citrus fruit growers may look confidently to the metropolis for a growing consumption of their products, according to a survey of the subject by Charles J. Junod issued by The Bank of America, New York.

New York's annual consumption of all citrus fruits is estimated by this writer at 442,523,916 pounds of which oranges comprise 361,627,500 pounds. New York consumed more of oranges than of any other fruit, and the steady

growth in the demand for oranges is shown by the fact that in 1922 receipts of this fruit in the metropolis were 8051 carloads, while in 1923 they were 12,133 carloads. Imports of grapefruit grew even more rapidly, the total for 1922 having been 2,134 carloads, while the total for 1923 was 3,851 carloads.

This gratifying development of the demand for citrus fruit in the greatest food market of the United States is ascribed by the writer to the improved methods of raising, grading and marketing the fruit which have been put in effect in those sections where it is produced. The survey says:

"The production and marketing of fruit has undergone a revolution within the past fifteen years. Not only has advance in the science of pomology increased the yield per tree and produced finer, better flavored and better keeping fruit, but appropriate care is now taken to insure its reaching the consumer in perfect conditions.

"The change that has come can best be summed up as standardization. In the case of a natural product this is necessarily more difficult than with a manufactured article, but with citrus fruits a remarkably high degree of standardization has been reached through proper care and pruning of trees, prompt collection and shipment of fruit, careful and impartial grading, better marketing methods, the use of suitable containers, the employment of refrigerator cars at appropriate seasons, etc.

"In this way both the production and the distribution of the fruit has been placed on a more efficient basis. Consumers can buy with more assurance, and, though price, of course, fluctuates with demand and supply, they are enabled to obtain the full value of their expenditure because of the protection which standardization affords against inferior and unsatisfactory fruit."

Good rule for the conversationalist: Never stick your saying piece in the face of the poor hearer. He may be better able to hear you, but the germs you speck his face with may be too much for his constitution.

In writing to advertisers, please mention The Citrus Industry.

Fishing Is Good

Get one of our all cypress 14 foot row boats—finished in three coats of best paint and varnish—tongue and grooved floor—with stern board for “kicker” or outboard motor—and go get them.

If you need a sprayer, duster, gasoline skid-motor, in fact, any kind of a motor, water or irrigation pump or system, house lighting plant, large or small all enclosed tractor—drop us a line.

Let us give you a price on what you want.

Orlando Manufacturing Co.
211 Long (Grace) St.
Orlando, Florida.

DUSTING SULPHUR

Your state and government authorities recommend dusting with sulphur for the control of

Rust Mite and Red Spider



on citrus, but they have further suggested that Flowers of Sulphur should be selected for best results. There are many different grades and qualities sold as “Dusting Sulphur” so that control of Rust Mites and Red Spiders will be governed by the particular brand or grade which you purchase. For best results and efficiency of application, demand “ANCHOR” BRAND SUBLIMATED VELVET FLOWERS OF SULPHUR which is the highest quality of sulphur and the most satisfactory for dusting citrus for rust mite and red spider. The initial cost of “Anchor” Brand may be more than other dusting sulphurs, but the reduction in labor, the saving of sulphur, and the improvement in quality of the fruit, will prove that “Anchor” Brand is the cheapest investment. “ANCHOR” BRAND WILL NOT HARDEN OR CAKE AND FORM INTO BALLS OR PELLETS. It is free-running in its natural state and does not require adulterants of any kind. When hand or power dusting machines are properly adjusted, the “Anchor” Brand will flow freely, producing a veritable cloud of impalpable sulphur dust, thereby making a big saving in the quantity of sulphur required.

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Jacksonville's Leading Hotel



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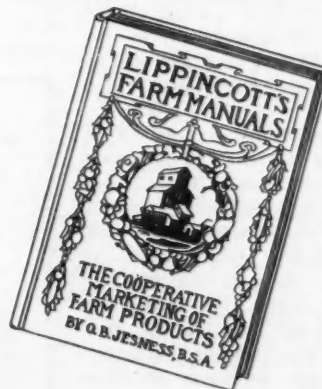
Rates:

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Chas. B. Griner, Manager,
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SAVE TWO DOLLARS

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of Farm Products,	\$3.00
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Send all orders to
THE PACKING HOUSE NEWS
Tampa, Florida.

Business Necessitates Enlarging Nurseries

Reporting that the past season was a very successful one, and that prospects for future business appears to be even better, W. D. Sperry, now sole owner and proprietor of the Quality Nurseries, Lakeland Fla., recently required possession of a choice location on West Main street of that city, where Mr. Sperry announces he is going to operate his office and nursery combined.

The rapid growth of business during the past year exceeded all expectations, states Mr. Sperry, and have made it necessary that the nursery get into larger and more suitable quarters. The new buildings are under construction and it is expected that they will be occupied and ready to operate about the middle of June or very soon thereafter.

The offices of the new building will be finished in two-tone old ivory and mahogany, with furniture to match the latter. The avocado shed, which will adjoin the offices, will be the most complete and finest in the state and will be equipped with the Skinner irrigation and Skinner heating system throughout. This shed will be 150 feet long by 75 feet deep and will be of cypress with a three-quarter lattice coverage.

The Quality Nurseries started in business only a comparatively short while ago, and at that time were handling citrus stock and ornamentals. Later Mr. Sperry closed a contract with John B. Beach, known to many in this state as the "avocado Burbank of Florida," to handle exclusively through the Quality Nurseries all of the avocado and mango trees grown by Mr. Beach. "The John B. Beach avocado and mango trees are guaranteed to be free from the dreaded avocado scab, and several other features make them especially desirable," declared Mr. Sperry.

Avocado plantings are beginning to take quite a hold in Florida, states Mr. Sperry, and during the past season the demand quite exceeded the available supply. Also two carloads of avocados and mangos were shipped to Texas and just this month he has received an order from Mexico City for a number of trees, the customer explaining that he wants to plant some of the budded trees in

comparison with his seedlings. As Mr. Sperry explains, this order is quite an honor as avocados in Mexico grow wild in many places.

Every avocado tree sold has to have a state tag accompany it, explained Mr. Sperry, and in the new quarters with the office and nursery combined, when customers call for trees they can pick out what they want, have the tags made out right there and take the stick with them if they desire to.

This does away with the old system of having to order through the

office and then call at the nursery for the trees. Large or medium orders will be delivered anywhere in the state by the company's own trucks, thus insuring perfect handling of the trees while in transit, says Mr. Sperry. But small orders will receive the utmost care and attention and particular concern will be given to those who desire to have a survey of their land made before planting whether it be for home or commercial plantings.

In connection with the nurseries

Continued on Page 24

HOTEL HILLSBORO

Tampa, Fla.

TOP O' THE TOWN

European Plan, Fireproof 300 Rooms With Baths

THE CENTER OF TAMPA

For Your Comfort

HOTEL TA-MIAMI

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NOTE:

The success of this hotel has been achieved by its appointments and its strict adherence to the principal. "The welfare of the guest is the first consideration."

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HOUSE AND BUILDERS SUPPLIES

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We ship large or small orders

17th St. and 6th Ave. TAMPA, FLORIDA Phone 51-219

Lyons and Associates Buy Fertilizer Plant From Exchange Company

Purchase by C. W. (Joe) Lyons and associates of the fertilizer manufacturing plant in Gary at Thirty-fifth street, from the Exchange Supply company, a subsidiary of the Florida Citrus Exchange, was announced recently.

Mr. Lyons for the last ten years has been in the field service of the Gulf Fertilizer company here. The names of his associates in the new undertaking were not made known. Mr. Lyons said they would be announced when application for a charter for the new company is filed.

The new concern will be known as the Lyons Fertilizer company. The company will continue to operate the plant under a cash capital of \$250,000, Mr. Lyons said.

To Increase Output.

The factory has been under the management of Charles H. Walker, in charge of all the Exchange company's branches. Mr. Walker will remain with the Exchange company, it was announced.

The output in tonnage of the Gary



C. W. (JOE) LYONS

plant probably will be increased within a short time, Mr. Lyons said. The new company will specialize in manufacturing citrus and truck goods.

In confirming the transfer of the property, Mr. Lyons said:

"In taking over this plant, it is the aim of the new company to continue to manufacture the highest grades of fertilizer. We will give our grower patrons the best field service possible and second to none in the state.

"We plan within a short time to increase the output of the plant, which will necessitate an enlargement. A complete spraying department will be a feature of the plant."

Mr. Lyons is well known in Tampa. He has been active in various civic and other enterprises.

Weeds plowed up or mowed down now will not grow crops of seed to grow more crops of weeds another year. Keep the plows busy through June anyway and the mowing machine going in the pastures well into July or August.

We are out of the high rent district and can offer you

New Office Furniture Bargains For Cash

Located outside of the HIGH RENT DISTRICT, we offer you real bargains in Standard Lines of NEW OFFICE FURNITURE. Our Desks, Tables, Chairs, Safes, Letter Files, Legal Files, Adding Machines, Typewriters and all mechanical office devices are selling at THE LOWEST PRICES EVER QUOTED IN TAMPA. These prices will also be allowed On All Mail Orders.

WE ARE NOT PRICE CUTTERS, WE ARE EXPENSE CUTTERS

Without exception, persons visiting our store have been amazed at the values we have to offer. We are able to do this because WE SELL FOR CASH, COLLECTION EXPENSE IS ELIMINATED, HIGH RENT EXPENSE ELIMINATED, EXPENSIVE BOOK-KEEPING AND BAD ACCOUNTS ARE ELIMINATED.

We Solicit Correspondence and Will Make Bids on Equipment Tnywhere in Florida. Buy your furniture where your money will buy most—we sell for cash and thus sell it for less, an investigation will prove this.

Office Economy Index

960 Twiggs Street Phone 2968
Opposite Union Depot
TAMPA, FLORIDA

FLORIDA EAST COAST RAILWAY COMPANY FLAGLER SYSTEM INDUSTRIAL DEPARTMENT

J. E. Ingraham, Vice-President H. S. McLendon, Agricultural Agent

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J. D. Ingraham, Sales Agent

Model Land Company has large acreages of the best types of agricultural and grove lands for sale. Some of this land is situated in drainage districts; several of these districts have been completed, others are nearing completion; still other tracts of land are located where there is no special drainage necessary.

Chuluota Company has exceptionally fine residential property as well as agricultural and grove lands for sale, in a beautiful high, rolling, pine, fresh-water lake region of Seminole County. This is situated on the Okeechobee Branch of the Florida East Coast Railway, and can also be reached by splendid highways from either Sanford or Orlando. Climatic conditions are fine in this locality the year round.

All the land companies will sell in large or small tracts, cash or terms. Their lands are located in all the East Coast Counties; principally in the following: Monroe, Dade, Broward, Palm Beach, St. Lucie, Osceola, Seminole, Flagler and St. Johns.

For definite information or particulars write the Main Offices or the local agents for sale of the Company's lands.

Local Agents Appointed for Sale of Lands

J. A. Rowand	St. Augustine, Fla.
C. D. Brumley	Chuluota, Fla.
D. E. Austin	Fort Pierce, Fla.
J. B. McDonald Co.	West Palm Beach, Fla.
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Pepper & Potter	Miami, Fla.
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P. L. Wilson	Key West, Fla.
A. R. Livingston (Cape Sable Lands)	Homestead, Fla.
W. H. Phillips	Kenansville, Fla.
L. B. Bouchelle	New Smyrna, Fla.
Ralph Crosby	San Mateo, Fla.

Main Offices: City Building, St. Augustine, Florida.
Jacksonville Office: 239 West Forsyth Street.

Twenty-four

EAST COAST BOYS GIVEN TRIPS TO SHORT COURSE

One boy in every Florida county thru which the East Coast railroad passes is to be given a free trip to the University of Florida for the boys' short course of one week late in May. Enough money for this purpose has been set aside by the Model Land Company, St. Augustine, according to a letter received by Boys' Club Agent R. M. Blacklock.

The boys who win these scholarships will receive instruction in the various phases of farm work. This short course is an annual affair, and is looked forward to by club workers and members as the final grand chapter in the club program for the year.

This is not the first time the Model Land Company has given this assistance to farm boys. However, as expressed by Mr. Blacklock, "It reiterates the company's stand on things agriculturally and demonstrates their belief that the solution of the future is wrapped up in the boys and girls of today."

LARGER BANANA CROP NOT MATERIALIZED

Insufficient rainfall throughout the Bluefields banana region has resulted in much smaller yields than were an-

THE CITRUS INDUSTRY

ticipated. At the beginning of the present year it was estimated that the total exports for the year would be in the neighborhood of 4 million bunches or 500,000 more than were exported in 1923. This estimate was based on the fact that 1,500 hectares of new plantations were expected to produce in 1924, but the bad weather has kept down production considerably. According to Consul William W. Heard in a report to the Department of Commerce, 1,021,572 bunches were exported to this country during the first four months of 1924, some 40,000 less than the same period of 1923.

BUSINESS REQUIRES ENLARGING OF NURSERY

Continued from page 22

business, Mr. Sperry states that the company will handle all kinds of landscape gardening—from the making of a beautiful lawn for the home to the laying out of elaborate grounds and golf courses. For this work the services of one of the best-known engineers in the state has been secured, who will be at the head of an able corp of assistants.

Mr. Sperry invites correspondence from everyone who is contemplating an avocado or mango grove. Also citrus fruits and ornamentals and

smaller fruits like blackberries, grapes etc. He says that his company will be glad to make bids on landscaping or the laying of golf courses anywhere in the state.

Death to Rust Mite and Red Spider NIAGARA SULFODUST

Peninsular Chemical Co.
Orlando—Florida

Information—Service
—Results—

"COULD BETTER FERTILIZER BE
MADE WE WOULD MAKE IT"

Before buying get our new April pricelist of our "SIMON PURE" and "GEM BRANDS" which have been the Standard of Quality for the past forty years with Florida growers. 1924 Almanac now ready, write for one. E. O. FAINTER FERTILIZER CO. Jacksonville, Florida.

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A Monthly Magazine devoted to diversification in fruit growing and to home and civic ornamentation.

The kind of a magazine you will enjoy in your home. It tells of the different kinds of fruits which can be successfully grown in Florida and it aids with helpful suggestions about ornamentals and flowers for your home or community.

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**Built Up to a Standard
Not Down to a Price**



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RUST MITES

Now present in many groves. Are you prepared to take prompt Control Measures for the protection of your fruit? This insect multiplies and spreads with great rapidity and the damage is quickly done.

Schnarr's Superfine Dusting Sulphur

An effective and economical remedy. Or, if you prefer spraying—

Schnarr's High Test Lime Sulphur Solution

will give results. If Scale is to be considered in addition to Rust Mites

Schnarr's Oil and Sulphur Mixture

will get them both. Our several locations insure quick deliveries.

Also a full line of HAND AND POWER SPRAYERS AND DUSTERS immediately available together with all ACCESSORIES and INSECTICIDE MATERIALS.

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NOTE: Aphis appearing again in many localities. Schnarr's Aphicide—a new but proven remedy—thoroughly tested—much cheaper than Nicotine Sulphate or Nicotine Contact dust—Get in touch with our nearest representative.

WILL FLORIDA BECOME THE GREATEST GRAPE STATE?

Continued from page 15

not be assumed that all varieties will do equally well under similar conditions. Whenever possible the company makes a soil survey of the land proposed to be used for grape culture in order that prospective growers may receive proper advice as to the varieties they should plant, I was told.

"What do you consider a fair yield?" I inquired. "Grapes come in to bearing eighteen months after planting in this state," replied Mr. Lockwood, "and it is usual to expect about one thousand pounds per acre at this time. In thirty months from two to three tons per acre is a normal yield and in after years a satisfactory increase will follow with proper care."

Among the many different bearing vines I inspected in the Nurseries vineyard were; Captain, a fine black grape which is considered equally good for table or juice purposes; Herbemont, an especially fine juice grape, purple in color and a prolific bearer; Ellen Scott, noted as one of the finest quality bunch grapes produced; Armalaga, a large white desert grape and popular wherever grown; Carman, probably the most widely planted grapes in Florida and one of the hardest known, while many others of white, red, purple and black varieties testified silently against the old statement that grapes will not grow in Florida.

"Are there many pests which attack in Florida?" I asked. "There are several pests and diseases of greater or lesser importance," said Mr. Lockwood. "Our hybrid varieties are entirely resistant to phylloxera (root louse) which is the most dreaded of grape pests. Spraying or dusting for the various diseases which are found in Florida are effective measures for the prevention or cure of such as we are troubled with. So far this year we have had occasion to spray some vines twice, while others not at all. Treatment must be determined by the complaint, in grape culture as in other lines of horticulture."

The vineyards of the Southern Adapted Nurseries are located on well-drained hammock land. However, I was informed that some of the best vineyards of the state are on what might be called a poor quality of soil. Often the finest varieties thrive best planted on high ridge land, but I believe that I cannot lay too much stress on the importance of securing proper advice as to the varieties that should be planted on the

THE CITRUS INDUSTRY

available land in order that the best results may be obtained.

I was much interested in the many test plantings of not only grapes, but blackberries, raspberries, cherries, blueberries and other small fruits. These will later give information of great value to the horticultural progress of the state. On the whole, it was a visit well worth the while, and I heartily recommend it to anyone who is really interested in the production of grapes and the other fruits I have named. The blackberries I picked and ate were of exceptionally fine flavor, and the hospitality and courtesy with which I was shown around made me feel right at home.

There is little question in my mind about the certainty of Florida's branching into different lines of fruit growing. There is little doubt but what in a short time Florida will be recognized not alone for her superior citrus fruits, but also for her delicious grapes and berry offerings. Then as each branch of horticulture expands, the fame of Florida will extend into the northern markets and enrich her citizens.

Within the memory of living men, the great citrus industry of today was but a struggling infant when sorely hurt by a great freeze. But the citrus industry recovered, and today returns millions of dollars to the growers. Then who can say that the future of the grape industry is not as promising? The facts are, we have land in abundance; we have the climate; we have the southern varieties especially adapted to this country; we are already producing many tons of grapes annually, which have always sold for a good price; and last but not least is our belief in the limitless possibilities and probabilities of this great state of ours.

Then will Florida become the greatest grape producing state in the union? To this question only Father Time can supply the answer. However it is extremely easy to arrive at some predictive conclusions due solely to the solid accomplishments of grape growing to date. For instance, it is easy to visualize the homes of Florida being supplied with table grapes from the back yard. It is easy to conceive that great acreages of vineyards will in time greet the eyes of the travellers. It is easy to imagine the canning and bottling works being established in the area of greatest development, and—still in the pleasing realm of prediction—it is an attractive thought that enables one to

measure beforehand, that many citizens and future citizens of Florida will find adequate incomes and independence in the growing of grapes in this state.

No other food can quite take the place of milk. Economize elsewhere but be sure to use plenty of milk.

Turkey raising in Florida is a profitable business, but one must study the game.

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SUPERIOR GROVE
Plant
Superior
Nurseries
Trees
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SUPERIOR NURSERIES
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**Kills
white fly
and scale insects**

EMULSO
THE BETTER SPRAY

**Peninsular Chemical Co.
Orlando—Florida**

Information—Service
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QUALITY NURSERIES, Lakeland, Fla.**W. D. Sperry, Sole Owner.****SPECIAL ANNOUNCEMENT**

For your convenience, and that we may better serve everyone, we are opening new quarters, offices and nurseries combined, on West Main Street, Lakeland, Fla. We shall be pleased to have you inspect our stock after June 20th. Genuine JOHN B. BEACH Avocado and Mango trees, citrus, grapes, blackberries, other small fruits and ornamentals. We guarantee our stock to be the finest that money can buy.

FURTHERMORE—

We are now prepared to give you service extraordinary on—

LANDSCAPE GARDENING—**BEAUTIFICATION OF ALL KINDS—****LAYING OF GOLF COURSES—**

Most complete and up-to-minute service in the South—by men who know their business.

NOTE—This change of location does not affect our postoffice address.

WHEN YOU BUY AVOCADOS AND MANGOS—

Be Sure You Get

Genuine**JOHN B. BEACH TREES****Genuine**

Positively Free From the Dreaded Avocado Scab.

Our new avocado shed, now under construction, will be the finest and most complete in the state of Florida. When in Lakeland pay us a visit. We shall be pleased to show our trees and stock to you. Correspondence invited—we are glad to give free planting instructions and service.

Genuine JOHN B. BEACH Avocado and Mango trees are

Sold exclusively through

QUALITY NURSERIES, Lakeland, Fla.**W. D. Sperry, Sole Owner.**

Quality Fruit Brings a Quality Price

Generally speaking, it is the article that is superior to the others in its field that is most in demand. Second to this is the appearance of the article—is it pleasing to the eye; does it look so good that it will command instant attention; does it stand head and shoulders above the "average." To be really superior an article must outclass all others in every way, and so the "superior orange," the kind that is truly "fancy," must be of fine, bright color to bring top price in the market.

Now I well know that there are many persons who still claim that the flavor and sweetness is what sells fruit. It most certainly is not. To quote a well-known selling agent, "it is bought by a public educated to judge commodities by their eyes, and we cannot possibly hope to build up a sufficiently strong demand for Florida fruit simply on the basis of its flavor." And so that's that.

Perhaps the greatest pest in the detracting of appearance and texture is melanose. Also it is responsible for much decay. Then comes rust mite and scab. The cull pile is the home of scabby fruit and that means a total loss to the grower. Rusty fruit does sell, but at considerably less than bright fruit, so that causes

a loss also. Many growers spray consistently through the summer months and relax their efforts in the fall or early winter which results in their January and February fruit becoming rusty. That is false economy.

Bright fruit is the keynote. And so intelligent spraying and dusting is vital. However many growers are dependent on outside spraying and dusting schedules. In this, growers are at liberty to seek the aid of well-known and reliable horticulturists and trained representatives of various insecticide and chemical companies. Grove inspection service was first introduced in this state by J. Schnarr & Co., well-known all over Florida. Their first step in helping the grower to fight disease and pests was to get qualified citrus men and place them and their long knowledge and experience of citrus insects and diseases at the disposal of grove owners.

Then after a careful inspection these men prescribe proper control measures to check or exterminate, as the case may be. The grower who avails himself of this service is on the right road to produce bright fruit and it is not how much fruit did I produce but how much did I get for it, that pays the bills and puts money

in the bank. Even a good season is a poor one if the quality of the fruit be poor, for you will have neglected to make the money that could have been made with bright fruit.

New factories in Orlando have been erected by J. Schnarr & Co., to take care of their growing volume of business everywhere. As their grove inspection service has grown, factories have had to be built to keep the pace with the intelligent grower. Thus do the manufacturer and grower work together for the ultimate good of all.

In their desire to better serve the growers of Pinellas and Hillsborough counties and the lower west coast, this company has recently opened a warehouse in Tampa where stock materials are carried. There are also on display power grove dusters and many different sizes of sprayers. This branch is in charge of Homer J. Richardson, well-known and liked all over the state. Mr. Richardson in a recent conversation with the writer stated that in his opinion the real money in the growing of citrus is in producing better quality and bright fruit. Mr. Richardson stated that either himself or his company would be glad to advise any grower as to the production of better, brighter fruit.

Twenty Years of Experience

and close study of Florida soils and their needs, particularly as regards Citrus Crops, produced

BETTER QUALITY FERTILIZERS

They are right as to availability, sources and mechanical condition.

Write for further information.

Trueman Fertilizer Company

Jacksonville, Fla.

Agricultural Chemicals

Special Mixtures

Insecticide Materials

Controlling Striped Cucumber Beetle

By W. P. Flint, Entomologist, University of Illinois

During the past five seasons, the Entomological Section of the Natural History Survey has carried on experiments to test different methods and materials for controlling the striped cucumber beetle.

In the course of this work, many poison and repellent dusts and sprays have been tested. The best results have been obtained each season from a mixture composed of one part calcium arsenate to twenty parts of gypsum. This mixture was first tried by the Ohio Agricultural Experiment Station, and after three years of tests at that station, was recommended by them as the best material of controlling the striped cucumber beetle. The Illinois results have confirmed those already obtained at Ohio.

Calcium arsenate, or arsenate of lime can be obtained from any large dealer in insecticides. Gypsum, in the form of land plaster, can be purchased from nearly any lumber yard. In

most cases, this will be the burned gypsum, and will contain some fibre as it is prepared for use in making plaster. This may be easily sifted out and the material then mixed at the rate of one pound of arsenate of lime to twenty pounds of gypsum. Be sure that the two substances are thoroughly mixed. This may be accomplished by running the two through a screen several times, or by putting both substances in a barrel, keg, or tin pail with a tight cover, and rotating the container for several minutes. A screen or partition should extend part way across the inside of the container to insure a more thorough mixing of the contents. This dust may be applied to the young cucumber plants by means of the ordinary dust guns, or blower dusters, or by a home made shaker. The shaker is made by nailing a wooden extension bail to the sides of a half gallon tin pail or bucket having tight fitting lid. Punch

holes in the bottom of the bucket with an eight-penny nail at the rate of four holes to the square inch. These holes should be punched from the outside in. Fill the bucket half full of the dust and apply by a shaking or jiggling motion. The first application, of the dust should be made as the cucumber plants appear above the ground and should be repeated at five or seven day intervals until the vines have reached a length of two or three feet. If heavy rains occur, dust immediately after the rain ceases, even through an application may have been made just before the rain. Be sure the leaves of the plants and the surface of the ground around the stems are kept covered with the dust.

A two per cent nicotine dust has been included in these tests during several seasons, and has generally stood second to the calcium arsenate, gypsum mixture.

For Sale

Acreage. Excellent land suitable for Citrus, Grape and Truck Garden. Location between Lakeland, Mulberry and Bartow. Prices very reasonable. Terms. Address G. Norstrom, Export Club House, Mulberry, Florida.

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Jacksonville, Fla.

New Method of Giving a Tree a New Root System

By J. H. Jefferies, Supt. Citrus Experiment Station

All budded citrus trees are on some variety of citrus stock, any of which has its advantages and disadvantages. The rough lemon—used for years as a standard citrus stock throughout the state—as a rootstock is too vigorous for most citrus varieties, especially with the tangerines and certain oranges. Some growers are inarching with Cleopatra mandarines, their idea being to switch from the rough lemon to the Cleopatra mandarine as a rootstock. This is expensive as it requires about three seedlings to be set around the tree that is to be transferred from the old rootstock to the new. These seedlings have to be cared for the same as newly set grove trees. They also have to fight against the rough lemon root system which is much stronger than they are, which makes it hard for the newly set seedlings.

Work at the Citrus Experiment Station during the last twelve months has resulted in findings that should prove of interest and encouragement to the citrus grower. A new way has been found to give the citrus tree a new root system. No inarching, no budding, no grafting, is necessary. The process is simple. Results so far seem to be satisfactory.

How to do it: Make a cut about half way around the trees to which it is desired to give the new root system. Make this cut just above the bud union. About a quarter of an inch immediately under this cut make another cut of the same length. Take out the piece of bark between the two cuts. Bank the trees well above the semi-girdle, leaving the bank until the new root system is formed and well established. It would be advisable to put a straw mulch over the bank to prevent wind from blowing the sand away. In case an orange is budded on a rough lemon, the tree will be partly on its own root system when the new system is well established. Later the girdle could be carried a little farther around the tree, giving it still more of its own root system. Care should be taken not to do too much girdling until adequate new root system has formed. It will be advantageous to maintain a portion of the rough lemon roots, as this stock

is a deep feeder.

This system of partial girdling and banking is applicable for sweet seedlings that are attacked with foot rot. A number of seedling trees have been rejuvenated by forcing a new root system higher up on the tree. This work should be done before the trees are too far gone, before they are too old and nearly worn out.

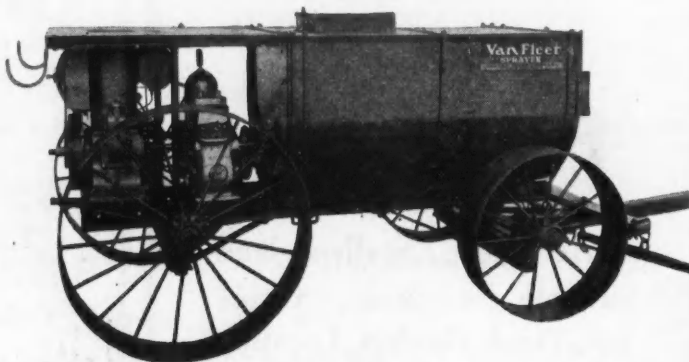
Specimens of new root systems established by this method may be seen at the Citrus Experiment Station at Lake Alfred. While it has not been possible to observe these trees with their new roots over a period of years, they established their new systems without any stunting or loss of growth. It is believed that this method will prove of much practical value to the citrus industry.

In writing to advertisers, please mention The Citrus Industry.

PINEAPPLE CANNING GROWING SOUTH AFRICA INDUSTRY

Large scale production of canned pineapple is now under way in South Africa by the African and Packing Corporation, Ltd., which is packing the fruit from an eight thousand acre pineapple plantation. South Africa is said to possess the largest industry of the British empire for the growing and canning of pineapples, Mr. William E. Vaughn, Jr., secretary to the American Trade Commissioner at Johannesburg, says in a report to the Department of Commerce. The 1921 agricultural census showed six thousand acres in South Africa under pineapple cultivation, but this acreage has expanded considerably during the past three years. At present the above company is the only extensive canner of pineapples in that region.

THE VAN FLEET SPRAYERS AND DUSTERS



Owing to the general tendency of citrus growers towards the use of Power Sprayers and Dusters of large capacity to be operated by gasoline engines, we have given this part of our Product special attention, and desire to refer to the improved line of Pumps, Dusters and Gas Engines that are installed on our complete outfits.

SPROCKET and CHAIN drive used in transmitting power from engine to pump. SPROCKET and CHAIN drive used to operate agitator.

TANK—Cypress 200 gallon capacity, properly ironed.

STRAINER—Positive and simplified.

DIMENSIONS—Height 4 feet 3 inches, length 6 feet 11 inches.

WHEELS—30-inch front and 40-inch rear with 8-inch tires, spoke heads flush with tires.

TREAD—56 inches. Axle—4-inch dropped and of steel.

FRAME—4-inch channel steel.

EQUIPMENT—Two 50-foot lengths Rainbow Spray Hose 2 guns or 2 rods.

Submerged Filler attachment extra.

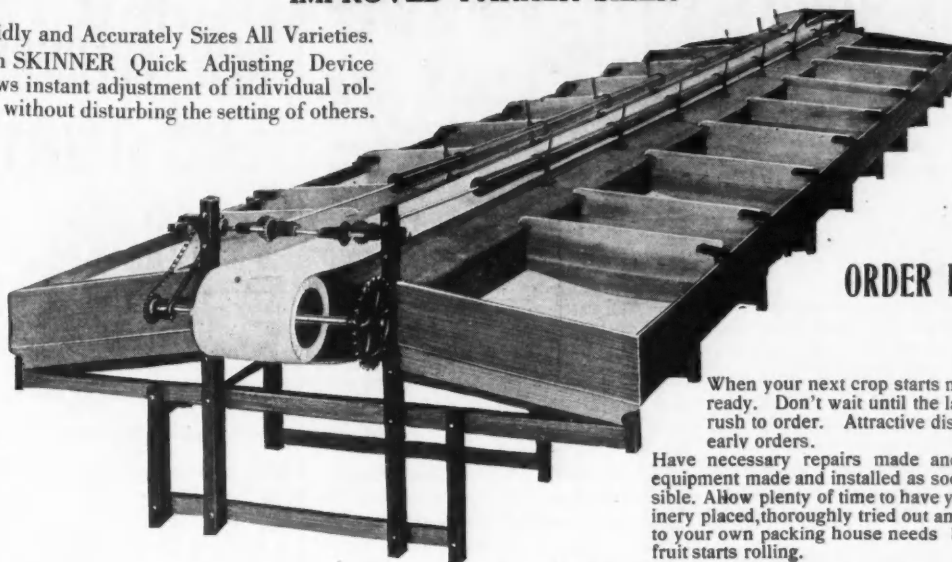
Prices upon request.

THE VAN FLEET COMPANY Florence Villa, Florida

The Virginia-Carolina Chemical Company of Delaware are now exclusive state agents. Machines may be seen on display at their warehouses and information furnished by their Jacksonville Office.

IMPROVED PARKER SIZER

Rapidly and Accurately Sizes All Varieties.
With SKINNER Quick Adjusting Device
allows instant adjustment of individual rollers without disturbing the setting of others.

**ORDER EARLY**

When your next crop starts moving, be ready. Don't wait until the last minute rush to order. Attractive discounts on early orders.

Have necessary repairs made and needed equipment made and installed as soon as possible. Allow plenty of time to have your machinery placed, thoroughly tried out and adjusted to your own packing house needs before the fruit starts rolling.

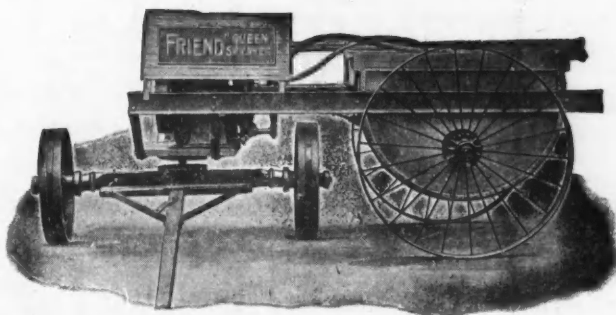
Write us now, today. Let our experienced packing house men help you plan your season's work. This puts you under no obligation.

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World's largest makers of Fruit and Vegetable Packing Equipment.

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THE
"FRIEND"
SPRAYER

Endorsed by hundreds of
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Don't wait until the last minute to place your order for a Sprayer.

Do your investigating now, before you need it.

If you have an old sprayer of any make, let us figure with you on putting a "FRIEND" Motor Pump on your present sprayer.

Write for catalogue.

Citrus Growers Supply Co.

State Distributors

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Tampa, Florida

Frank Skelly Says Outlook Is Improving

"With Florida shipments now practically out of the way, California is receiving very unsatisfactory prices for its oranges at present in the markets. Because of this there are some who hold that next season's outlook for Florida is gloomy. We do not believe this is the case," says Frank L. Skelly of the American Fruit Growers, Inc., Orlando, who continues:

"Apparently competition from apples is going to be cut. Reports are that the Northwestern apple crop will be about 50 per cent of what it was this season. Apple authorities in the Virginia-Maryland field believe the crop there will be about one-half of what it was this season. A shortage in the California grape crop is anticipated.

"In Florida the crop of better quality fruit for next season will probably be shorter than it was this season. Reports on satsumas along the Gulf Coast indicate that our crop will be an entire failure, which will consider-

ably influence our markets in the Fall. California is practically cleaned up on navels. They have about 22,000 carloads of Valencias for shipment, but if prices continue as they have been not all will be shipped. California citrus trees are in blossom now and no authoritative estimates of next season's crop are available. Authorities in California, taking into consideration the bloom, the condition of the trees and other things, are of the opinion next season's production of both navels and Valencias will be only about three-fourths of what it was for the present crop. It is rare that one heavy crop follows another in California.

"All the news we can obtain is encouraging for Florida growers. Next season will bring its selling complications, of course, but in our judgment the outlook for Florida citrus fruits is very considerably better now than it was a year ago at this time."

FUMIGATION CHECKS APHIS

Continued from page 9

The men interested in conducting the tests at Valrico feel that they have made a worth while contribution to the citrus growers of Florida. The practice of tent fumigation has never been carried on in Florida as in California, due to certain climatic conditions. However, in California long time fumigation of 45 minutes is necessary to be practiced with liquid hydrocyanic acid gas. By the method worked out at Valrico, Florida growers can obtain the same killing agent, hydrocyanic acid gas in dust form, and obtain in a measure the same results with short time fumigation.

The problem to be solved in the tests has been to hold a killing concentration of the gas. High winds and sparse foliage did not permit the desired concentration in the open. Under tent like structures the problem was solved.

CITRUS PEOPLE ATTEND FIELD SCHOOL SHOWING THEY WILL "CARRY ON"

"Citrus growers are still tremendously interested in citrus." Such was the report of officials and specialists of the Florida College of Agriculture upon their recent return from holding

a series of citrus schools in several of the citrus-growing counties of the state.

The farmers turned out well in every community in which a school was held, it was reported. An average of 30 actual growers of citrus attended the schools held in east coast counties, that is on the average. Many turned out who had attended a similar series of schools given last year when this practice was begun in a systematic manner, which showed that they realized the importance of learning more about the industry.

Those in charge of the schools reported that they were very much pleased with the interest shown by the growers in spite of the unsatisfactory prices received for fruit last winter. This indicates, they said, that the citrus people are determined to stick to their groves, to operate them by the best practices worked out by experience and scientific investigation and to "carry on."

Doc Hiller says: It is not the crops you have grown but the crops you will grow that will put you in the envied class; the past is gone the present is fleeting; the future is our hope.

Burning the woods is a sin. It destroys valuable wood and timber, it injures pastures rather than helps them, it destroys humus that all soils need, it may burn up fences or houses.

NEW COLUMBIA AND SONORA TALKING MACHINES

We have everything you might desire in the musical line. It will be a pleasure to show things to you. We give you service with a smile.



Special:
Columbia in
cabinet mod-
els \$110.00
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Terms will be arranged to suit your utmost convenience. Shipments made to any part of the state—promptly and safely.



Special:
Columbia
Console
models,
\$125.00 and
Sonora Con-
sole models
\$137.50

GOURLIE MUSIC CO.

P. O. Box 509 Phone 4777
309 Zack St. Tampa, Fla.
Opposite Y. M. C. A. Bldg.

Value of Bud Selection Proven by Test Trees

The value of bud selection as applied to the commercial grove is almost inestimable. We have trees planted in our bearing groves from ordinary methods of propagation, in check with trees from selective propagation work, both being of the same age and both in bearing, from which we have shipped the fruit, and these trees at six years old have shown a difference of over \$10.00 per tree in one year's production in favor of the pedigreed trees, and the difference in price obtained per box for the fruit is nothing short of remarkable when you take into consideration the fact that our pedigreed Pineapple oranges have brought \$4.20 a box, while the ordinary propagation referred to in the first of this article was incapable of bringing a higher price than \$2.35 per box, both being sold the same day, in the same market, at auction, to the same buyers.

THE FRUIT BUYER DEMANDS QUALITY. The planter must demand quality trees in order to produce quality fruit. You might as well expect to get a good producer of milk that would yield a large percent of butter-fat from a scrub cow that cost you \$20.00 as to expect to get a good yield of fruit that would grade high in first grade fruit from a tree to which bud selection has not been applied, and which you can buy at practically your own price.

Owing to the high class methods used in our propagation of pedigreed trees, we are unable to produce trees in large quantities, for this reason we are always sold out long before planting time.

Place your orders now for June and Fall planting's, and avoid disappointment.

Write us for The Book of Truth for Planters of New Groves.

"No nursery tree is a first-class tree unless budded from bearing trees of known quality and quantity of production."

Ocklawaha Nurseries, Inc.

(Home of the Pedigreed Citrus Trees.)

LAKE JEM, FLA.

Phone long distance Victoria through Orlando.

Telegraph Zellwood, Florida.

Extra Values in Transport's Advance Construction

Transport models offer you greater truck values not only because they are built of the best specialized units, but because they represent in every single detail the highest attainments in motor truck engineering and designing. Transports embody every important advance which seasoned experience has proved practical.

The superior quality of Transport workmanship is reflected in the perfection of some of the most noteworthy features of motor truck construction, such as Automatic Chassis Lubrication—Transport's Improvement of the Drive Shaft Brake—and Specially Designed Radius Rod Equipment. A part of the extra value that goes with the Transport.

Automatic Chassis Lubrication: All parts requiring grease are equipped with nipples for easy coupling to the Alemite grease gun, which, with 500 pounds maximum pressure, positively forces the lubricant into the closest-fitting bearing and wearing parts, ejecting old grease, grit and dirt. The well and wick system is used on all spring bolts and radius rod bolts. By capillary attraction, oil is drawn the full length of bolt, and in the case of springs, an even distribution between all leaves is assured. This system saves you time and labor and assures more thorough lubrication.

Drive Shaft Brake: Models 35, 55, 60 and 75 are equipped with specially designed Transport Drive

Shaft Service Brake, which is positive in action and applies braking pressure equally on both rear wheels. This brake checks the tendency to skid when turning a corner by proper control of the faster traveling wheel. A spring cushion on brake rod prevents grabbing action of brakes resulting from too sudden application by driver.

Radius Rod Equipment: Two strong steel rods, one on each side of frame held in place by means of all-steel brackets, which are securely riveted and bolted to frame and rear axle respectively, hold rear wheels in perfect alignment and make it impossible for rear axle to slip on springs, assuring perfect operation of braking mechanism under all conditions.

Bruce Motor Truck Co.

State Distributors

Tampa, Florida

Thirty-four

CITRUS FRUIT GROWING IN THE EVERGLADES OF BROWARD COUNTY

Continued from page 7

Mr. Walsh pays each tree regular personal visits, making notes as he goes of change in conditions, etc. A glance at his note book impresses one with the prodigious amount of scientific and detailed data, recorded concerning each tree. The life history of the tree as revealed therein reads like a story-book. Each notation and hieroglyphic means something as a glance at the key indicates.

Mr. Walsh is a picturesque character. Educated as a lawyer, for a time he followed the profession until he was tempted into the field of journalism. Editing "The County Paper" of Van Buren, Iowa, the Daily Sun at Ottumwa Iowa, and the Nebraskan at North Platte, Nebraska, successively. Later he became identified with Hearst's Chicago Newspapers. From 1896 to 1908 he served as a member of Democratic Central Committee, acting as Secretary for ten years.

A growing defect in hearing combined with his desire to escape the northern winters, caused him to begin spending his winters in Florida about 1908. About ten years ago he gave up his Iowa voting residence and has since devoted his entire time to the citrus industry in the Everglades. Thorough is the word which best expresses Mr. Walsh's methods and experiments. His records have been kept in a most exacting manner. He is the hardest worker on the Walsh plantation; sunup and sunset find him hard at work in his old grove, or in the new development. He does not leave the gathering of data for his reports and records to others. Clad in overalls, and with broad brimmed straw hat, the writer, on the occasion of a recent visit, found him with hoe in hand, attending the "patients" marked in his dairy "G. S. no L." (Green Stem, no Leaves).

Following in the wake of the successful demonstration on the Walsh grove, Frank Brown of Miami and many others are planting citrus groves on a large scale in the Everglades Muck of Broward County.

The work of Mr. Walsh promises to revolutionize the citrus industry in Broward County. Four-fifths of this prosperous county is in the Everglades. Navigable canals and hard surfaced roads are tapping the various sections of the muck back country. Although Fort Lauderdale has been shipping only about 40,000 boxes

THE CITRUS INDUSTRY

of fruit produced on the high pine lands near the sea coast, the citrus acreage has been increased many fold; naturally the bulk of the recent plantings have been in the muck lands, where nature has provided her own fertilizer, cutting off a substantial item of overhead expense and where the moisture holding eccentricities of the soil obviate the necessity of cultivation.

Broward County is destined to become a great citrus shipping county; the quality and appearance of her Everglades fruit already has been observed and recognized in the northern markets.

Created in 1914 by legislative enactment, Broward County has experienced a decade of remarkable progress. Hitherto, noted as one of the heaviest shippers in Florida of winter and early spring vegetables, the next decade will find the citrus industry a close second to the great trucking industry which has spelled Broward County prosperity.

If "pap" didn't want to use the flivver every time John wanted to use it to take his girl to ride, there'd be more farm-bred boys on our farms even after they grow up.

An endless number of nutritious and delicious table dishes can be made with Florida's common fruits as the main ingredient.

CLASSIFIED ADVERTISEMENTS

The rate for advertisements of this nature is only five cents per word for each insertion. You may count the number of words you have, multiply it by five, and you will have the cost of the advertisement for one insertion. Multiply this by the total number of insertions desired and you will have the total cost. This rate is so low that we cannot charge classified accounts, and would, therefore, appreciate a remittance with order. No advertisement accepted for less than 50 cents.

REAL ESTATE

FOR SALE—5 and 10 acre farms, all cultivated ready for seed. \$100 per acre on easy terms. American Development Co., Arcadia, Fla. 2t

10 ACRE ORANGE, grapefruit grove, 8 years old, Lakeland Highlands, near Haskell Townsite on Dixie Highway, near Haskell station and packing house Owner, H. J. Strimple, Penns Grove, N. J.

THE GROVE YOU WANT—You'll find it fully described and correctly priced in our new booklet "Groves and Farms" just issued. Send for copy. Dotson & Company 816½ Franklin St., Tampa, Florida.

WILL EXCHANGE West Texas cattle ranch for unimproved or improved land in Florida. What have you? Give price and full particulars. T. E. Bartlett, 3410 McKinley Ave., El Paso, Texas.

EARLY BEARING Papershell Pecan trees, budded or grafted and guaranteed. Great shortage this year. Write for catalog today. Bass Pecan Company, Lumberton, Miss.

Want to hear from owner having farm for sale; give particulars and lowest price. John J. Black Chippewa Falls, Wisconsin.

WANTED—To hear from owner of land for sale. O. K. Hawley, Baldwin, Wisconsin. June-1t

NURSERY STOCK

AVOCADOS—Priced from 85 cents up, in hundred lots depending on variety. Good assortment varieties, large plants, prompt shipment. Let us quote you. REASONER BROTHERS, Oneco, Fla.

FOR SALE—Cleopatra Mandarin seedlings. September delivery, enter order now. Cavendish banana plants and avocado trees. Write for price list. R. E. Skinner, Hillsboro Hotel, Tampa, Florida. May-4t

POLK LAKE NURSERIES

Offer to the grower young trees of standard variety, backed by 30 years of nursery experience and a guarantee which only honest dealing can justify. For full information address A. H. Sloan, Box 413, Bartow, Fla.

BANANA PLANTS for sale. Improved Cavendish, Hart, Orinoco, Ladyfinger. Information free. W. E. Bolles, Oldsmar, Fla. tf

FOR SALE—Peas and velvet beans of all kinds. New bags, even weights. All peas recleaned. H. M. Franklin, Tennesse, Ga. Mar.-4t

MISCELLANEOUS

Owing to the large acreage which will be planted to grapes the coming season it will be necessary to reserve plants early. Our plants are true to name, vigorous and well rooted. Reserve your plants now. Write for booklet No. a2. SOUTHERN ADAPTED NURSERIES

Bartow, Fla

FOR SALE—One second hand Wallis tractor in A-1 condition. Will sell cheap for cash. King Lumber and Manufacturing Company, Nocatee.

WHITE WYANDOTT Cockerels, regal strain—the best in the country, direct from Martin pens. Utility and show birds \$5.00 each; also eggs for hatching \$5.00 per 15. W. A. King, Gen. Del., St. Petersburg, Florida.

FOR SALE—Dairy and stable manure, car lots. Link & Bagley, Box 464, Tampa Florida. 6t

SOUTHDOWN SHEEP, White Rocks, Toulouse Geese, Guineas, Angora and Milk Goats, Circular free, Woodburn, Clifton, Va.

FLORIDA INVITES YOU—Write today for our new grove list in Supplement No. 4 to our regular booklet. It's full of bargain offerings and more than likely contains full description of the very grove you'd like to own. Dotson & Company, 816½ Franklin St., Tampa, Florida.

JELLY GUAVAS. "Our guava "Snow-white" is the finest jelly guava ever grown. Nice plants 25c each, \$2 for 10; \$18 for 100. Send for free catalog of other fruits and flowers. Royal Palm Nurseries, Oneco, Florida.

FOR SALE—Two Gas Engines, Wood Saw, Fireless Cooker and Cane Mill. R. O. Connor, 434 East Bay, Jacksonville, Fla. Jan 1t

WANTED—To hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

FOR SALE

Remington Portable Typewriter with standard keyboard. Has all advantages of larger machine. Ideal for farm and home use. \$60. cash or sold on easy terms. Remington Typewriter Co., 103 Parker St., Tampa Florida.